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Environmental Assessment

"Nationwide" Section 4(f) Evaluation

14.9 km South of Havre-South

STPS 234-1(7) 9; Control No. 2837

Hill County, Montana

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ENVIRONMENTAL ASSESSMENT
and
"NATIONWIDE" *SECTION 4(f)* EVALUATION

14.9 km South of Havre-South

STPS 234-1(7) 9; Control No. 2837

HILL COUNTY, MONTANA

This document is prepared in conformance with the *Montana Environmental Policy Act* (*MEPA)* requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the *National Environmental Policy Act* (*NEPA)* requirements for an Environmental Assessment under 23 CFR 771.119 and *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act* under 23 CFR771.135.

Submitted pursuant to:

42 U.S.C. 4332(2)(c), 49 U.S.C. 303 and
Sections 2-3-104, 75-1-201, M.C.A.

by the

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and the

MONTANA DEPARTMENT OF TRANSPORTATION

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I. Description of the Proposed Action

I. Description of the Proposed Action

A. Project Location, Length and Termini

The MONTANA DEPARTMENT OF TRANSPORTATION (MDT), in cooperation with Hill County, plans to improve transportation on Montana Secondary Highway 234 by reconstructing a portion of the roadway and replacing three existing bridges. Secondary Highway 234 extends south of Havre and is also locally known as Beaver Creek Road.

The proposed work would be done under a project designated by MDT as "14.9 km South of Havre South" [Project Number STPS 234-1(7) 9]. This proposed road reconstruction project begins about 14.9 kilometers (km) or 9.3± miles south of Havre and extends 16.3 km (10.1± miles) southerly to end at the intersection of Secondary Highway 234 and Taylor Road. Three existing bridges over Beaver Creek located about 21.6 km (13.4± miles), 26.1 km (16.2± miles), and 28.5 km (17.7± miles) south of Havre, respectively, lie within the segment of highway proposed for reconstruction.

The general locations of the project area in Montana and Hill County are shown in **FIGURE 1**. The approximate limits of the proposed road reconstruction project on Secondary Highway 234 are shown in **FIGURE 2**.

The proposed project lies entirely within the boundaries of Beaver Creek County Park. At more than 4,047 hectares (10,000± acres), Beaver Creek County Park is the largest county park in the United States. The park, located in the foothills of the Bears Paw Mountains, is characterized by rolling grasslands, wooded groves, rocky cliffs, wetlands, and riparian lands. Secondary Highway 234 runs directly through the center of the park and the roadway crosses Beaver Creek numerous times. Secondary Highway 234 (via Taylor Road) provides access to lands within the Rocky Boy's Indian Reservation and the community of Rocky Boy. Other recreation sites in the county park and in the Bears Paw Mountains can be accessed by remaining on Beaver Creek Road and proceeding south of Taylor Road.

Photographs of typical landscapes in the Highway 234 project area are shown in **PLATES 1** and **2**.

B. Scope of the Proposed Project

The proposed project would rebuild the existing 7.2 m (23.6± feet) wide paved roadway to provide a consistent horizontal and vertical alignment to blend with the topography, enhance safety, and provide more uniform driving conditions for motorists. The proposed highway reconstruction would be done to comply with MDT's design standards for Rural Major Collectors. The finished surface of the proposed roadway would be 8.4 m (27.6± feet) wide and accommodate two 3.6 m (11.8± foot) wide driving lanes and two 0.6 m (2.0± foot) wide shoulders.

The proposed improvements would be made generally following the existing alignment of the road, although slightly shifting the road is being considered at several locations to modify non-standard horizontal curves and to provide adequate sight distance for motorists.

Three bridges over Beaver Creek would be replaced for greater safety and adherence to current design standards. Each of the new structures would be built on or near the alignments of the existing bridges. The bridges to be replaced include:

- the 7.6 m-wide by 9.45 m-long (24.9-foot-wide by 31.0-foot-long) timber bridge located 21.6 km (13.4 miles) south of Havre;
- the 7.4 m-wide by 7.62 m-long (24.3-foot-wide by 25.0-foot-long) concrete T-beam bridge located 26.1 km (16.2 miles) south of Havre; and
- the 8.9 m-wide by 7.32 m-long (29.2-foot-wide by 24.0-foot-long) timber bridge located 28.5 km (17.7 miles) south of the community.

Another bridge occurs on Secondary Highway 234 about 17.1 km (10.6± miles) south of Havre and lies within the limits of this proposed highway project. MDT intends to replace this bridge under a separate project known as "Beaver Creek-S of Havre" [Project Number BR 234-1(5) 11], prior to the proposed highway reconstruction.

The planned improvements would include other measures to facilitate recreational use within Beaver Creek County Park and accommodate seasonal agricultural uses (haying and livestock grazing) of parkland. These measures would include:

- restoring portions of the Beaver Creek stream channel to enhance the existing fishery;
- constructing a roadside turnout for a future information kiosk at the north end of the project; and
- developing stock water sources away from the highway.

Other improvements would include grading, placing road base material and new pavement, installing drainage facilities, and revegetating disturbed areas. Signing for the roadway would be upgraded and guardrail would be installed where warranted.

More details about the proposed improvements and alternatives considered are in Part III.

C. Project Funding

The proposed improvements would be financed under Montana's Surface Transportation Program (STP) and the Highway Bridge Replacement and Rehabilitation Program (HBRRP) with funds from the Federal Highway Trust Fund. These funds are available through the *TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY* (TEA-21) and are administered by the FEDERAL HIGHWAY ADMINISTRATION (FHWA). Road reconstruction activities would be paid for through STP funding and the cost of replacing the three bridges would be funded through the HBRRP. STP funding is about 87% federal with a 13% state match. HBRRP program funding is 80% federal with a 20% state match.

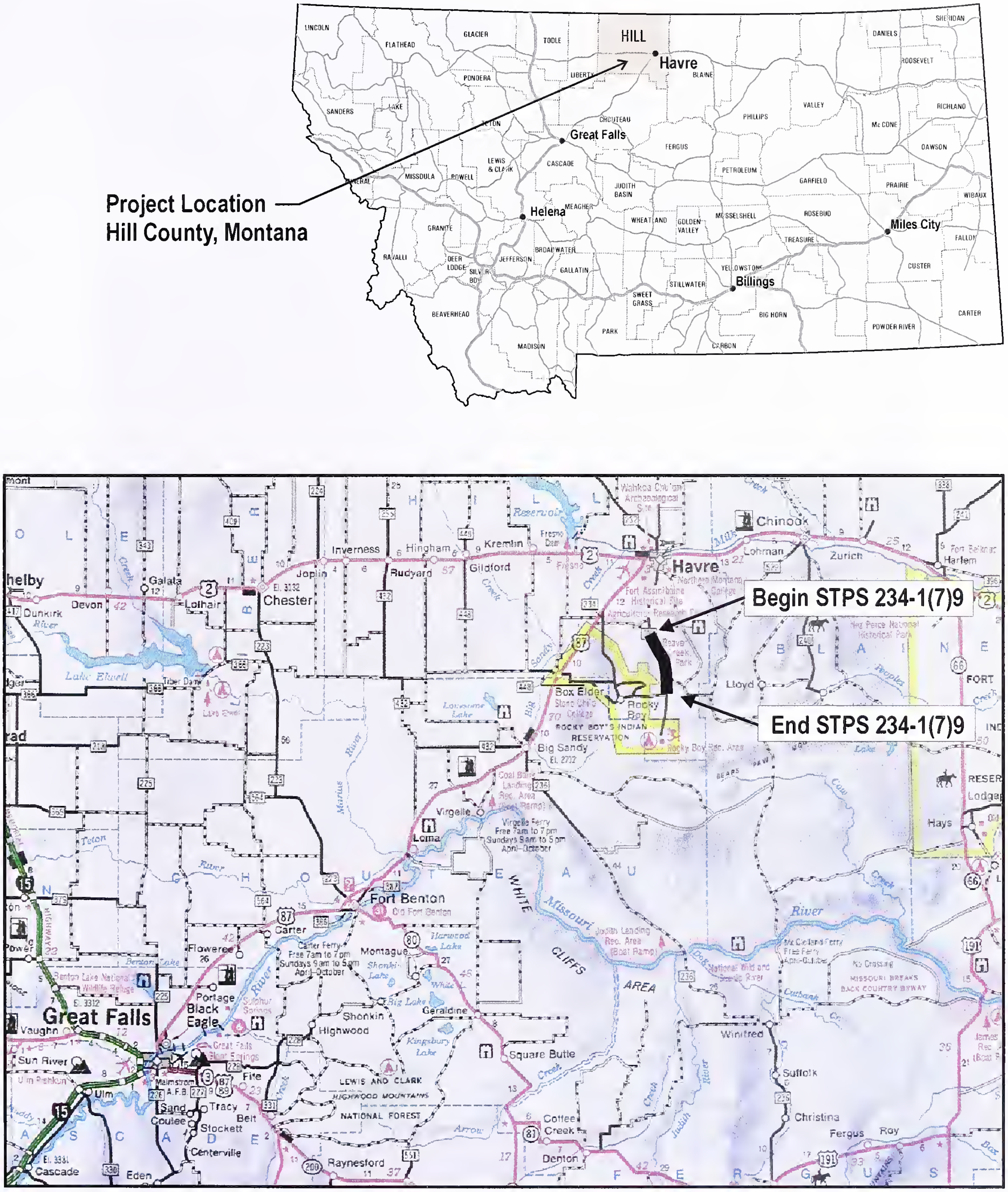


Figure 1:
General Area Location Map

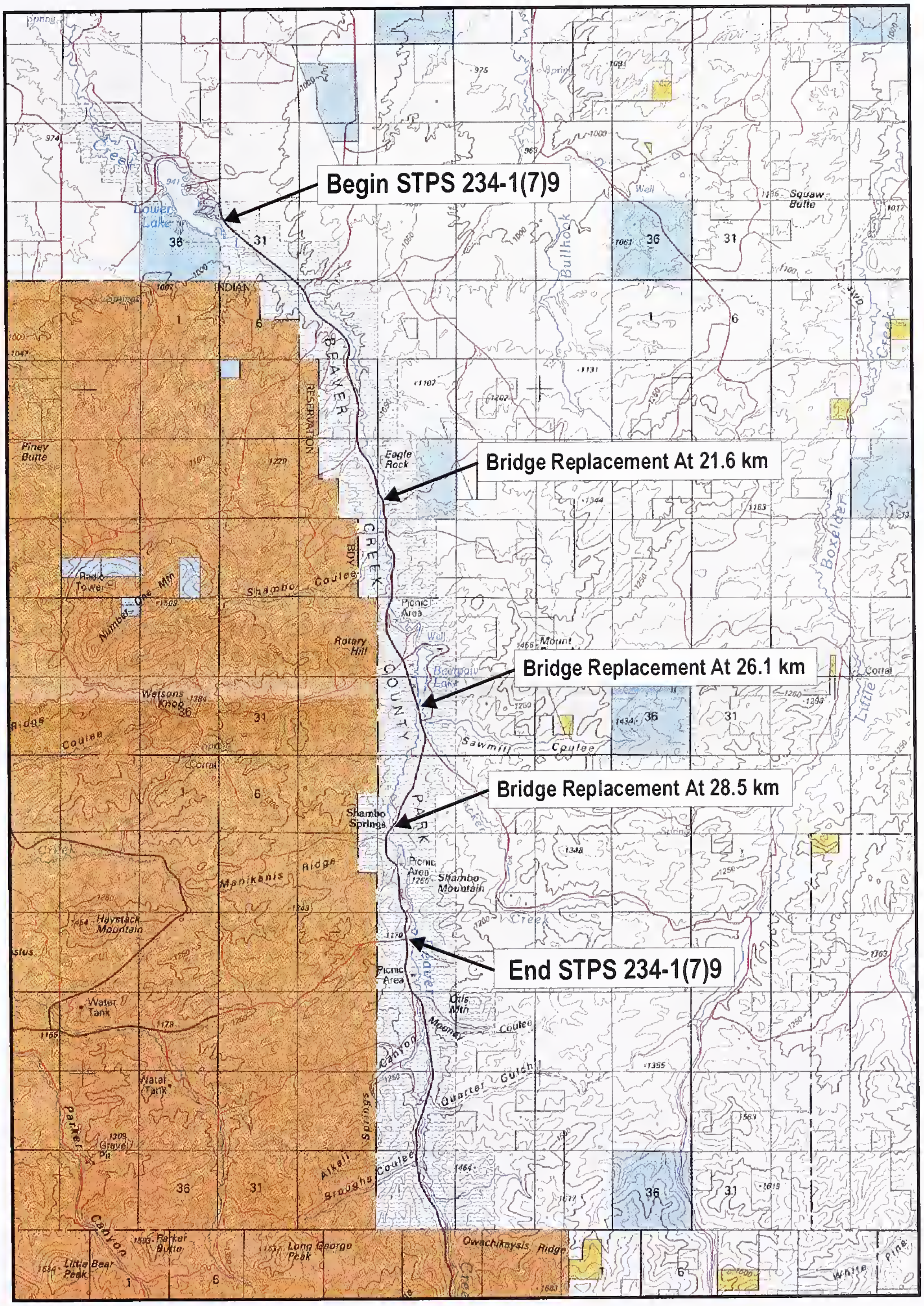


Figure 2: Project Location Map

Funding for Montana's Secondary highways are distributed based on a variety of factors including land area accessed, rural population served, and rural road mileage. The 1999 Legislature changed Montana's Secondary Highways Program to require counties in each of five Financial Districts to jointly develop and prioritize capital improvements programs. In the past, individual counties could prioritize projects within their jurisdiction.

D. Jurisdiction

Highway 234 is part of Montana's Surface Transportation Program - Secondary (STPS) System. Secondary Highway 234 begins at the southern edge of the City of Havre and extends about 30.3 km (18.8 miles) southerly to Taylor Road. The route then extends westerly along Taylor Road for another 4.2 km (2.6 miles) to the Rocky Boy's Indian Reservation.

Maintenance of Secondary Highway 234 has historically been Hill County's responsibility. However, action by the 1999 Montana State Legislature shifted the maintenance responsibility for paved secondary highways from individual counties to MDT. The transition in maintenance responsibility for all paved secondary routes was completed by January 2001. MDT is now responsible for performing major maintenance activities on the paved section of Highway 234 south of Havre and within its dedicated right-of-way. Hill County remains responsible for maintaining the gravel-surfaced Taylor Road (to the Rocky Boy's Indian Reservation) and paved portions of Beaver Creek Road south of Taylor Road.

The Montana Highway Patrol and the Hill County Sheriff's Department share the responsibility for law enforcement on Secondary Highway 234 and adjoining roadways.

General appearance of park from near Eagle Rock, looking west.
SW 1/4 SW 1/4 Section 16, T30N, R16E

General appearance of park from near Eagle Rock, looking south.
SW 1/4 SW 1/4 Section 16, T30N, R16E

Photo Page 1:
Highway 234 Project Area

Typical view of Highway 234in area just south of Bear Paw Lake.

Developed recreation facilities at Camp Kiwanis in southern portion of Beaver Creek County Park.

**Photo Page 2:
Highway 234 Project Area**

II. Purpose and Need for Action

II. Purpose and Need for Action

This section of the EA discusses the purpose of the proposed improvements and highlights the transportation and other needs of the Highway 234 project area south of Havre. The intent of this Part is to establish why the FHWA and MDT propose to spend large amounts of taxpayers' money while at the same time causing environmental impacts in the vicinity of the project. The alternatives identified in Part III were developed in response to these transportation needs.

A. Purpose

The fundamental purpose of the proposed improvements is to upgrade a portion of Secondary Highway 234 to provide for the safe and efficient movement of traffic. To accomplish this purpose, the proposed action must:

- incorporate physical changes to the roadway and its adjoining environment to increase the safety, comfort, and convenience of the traveling public;
- bring the road's design into compliance with MDT's design standards for Rural Major Collectors;
- provide new structures designed according to MDT's Bridge Design Standards and with increased hydraulic capacity to replace deficient bridges;
- reduce maintenance requirements and costs associated with the roadway, bridges and other drainage facilities on the route; and
- accommodate multiple recreation uses of Beaver Creek County Park and private interests along the route.

B. Transportation and Other Needs

This section identifies the transportation problems or concerns that already exist with the current transportation facility or that will exist if the proposed improvements are not implemented. These transportation "needs" focus primarily on traffic safety concerns and deficient conditions associated with the roadway and its bridges. The section begins with a brief history of the proposed project and a discussion of the roadway's use.

1. Project History and Status

The actual date that Highway 234 south of Havre and within Beaver Creek Park was originally constructed is unknown. It is known that the first 18.3 km (11.4± miles) of Highway 234, including 2.1 km (1.3± miles) within the limits of this proposed action, was overlaid in 1975 under project S-US 70 (1). There are no known construction projects for the next 0.8 km (0.5± miles), but the remaining 14.0 km (8.7± miles) was reconstructed by Hill County in 1955. Over the years, Hill County has spent numerous hours and funds patching the road and maintaining bridges on the route.

Prior to 1994, only the initial 13.76 km (8.55 miles) of Highway 234 was part of the State's Secondary Highway System. The section of Highway 234 beyond 13.76 km (8.55 miles) south of Havre was considered an "off-system" road and Hill County was responsible for maintaining this portion of the route. During 1994, the Hill County Commissioners requested the Montana Highway Commission (now the Montana Transportation Commission) to extend Secondary Highway 234 an additional 17.30 km (10.75 miles) south to Taylor Road and then westward along Taylor Road for 4.2 km (2.6± miles) to the Rocky Boy's Indian Reservation. Hill County's request to increase the length of Secondary Highway 234 was approved by the Highway Commission on September 1, 1994.

MDT and Hill County began working in earnest to improve Highway 234 south of Havre in 1995 after the Secondary Route was extended. A proposal to improve the roadway from Havre's south city limits to the route's intersection with Taylor Road was developed and advanced by MDT. Due to county funding limitations, the proposed project (known as Havre-South) was split into two sections so separate and shorter improvements projects could be more readily advanced. The "North Section" began at the southerly city limits of Havre and extended 14.9 km (9.3± miles) south to end at Beaver Creek County Park. The "South Section" then extended another 16.3 km (10.1± miles) further south within the county park to end at Highway 234's intersection with Taylor Road. The "South Section" generally included the same section of Highway 234 as MDT's proposed 14.9 km South of Havre South project.

"North Section" Project Development

MDT's (and Hill County's) initial plan for the "North Section" of Highway 234 was to maintain the existing surface width but to improve the roadway's surfacing and flatten roadside slopes. MDT proposed to both mill and fill or to pulverize the existing pavement and then overlay the roadway with new surfacing material. The section of Highway 234 north of Beaver Creek Park was overlaid under Hill County's direction during 1999.

"South Section" Project Development

MDT and Hill County originally planned to overlay the road's surface and repair or replace bridges and other drainage structures within the "South Section" of Highway 234. Project development activities and preliminary design work for the "South Section" of Highway 234 continued from 1995 through 1998.

During 1998, MDT completed a detailed review (safety audit) of the accident history and roadway characteristics of Highway 234 from its beginning point to Taylor Road. The safety audit highlighted several geometric concerns with the existing highway's design in the "South Section" that could only be addressed through reconstruction. These conclusions prompted MDT to review the design, safety, and feasibility of the proposed project and to compare estimated project costs with those of totally reconstructing the highway. Subsequent comparisons showed relatively minor differences in cost between totally reconstructing the road and pulverizing and overlaying the road as proposed.

In January 1999, MDT staff met to discuss options for the proposed project and ultimately determined total reconstruction was the most desirable development option for this section of Highway 234. On March 15, 1999, MDT informed the Hill County Commissioners of the recommended change in the scope of the project. The Commissioners were advised that federal money could only be allocated to the project if certain safety issues were addressed and that partial or total reconstruction were the only ways to alleviate the safety concerns associated with the highway's design. The Commissioners agreed with MDT's findings and concurred with a recommendation to change the scope of the work for the "South Section" of Highway 234 from an overlay to total reconstruction. The decision allowed MDT to proceed with the development and preliminary design activities for the 14.9 km South of Havre South project.

2. Current and Projected Road Use

Highway 234 is a locally important transportation facility in southeastern Hill County. The road serves primarily local traffic including residents of nearby farms and ranches, school buses, farm equipment, mail delivery, and service vehicles. Highway 234 also links Havre with the community of Rocky Boy on the Rocky Boy's Indian Reservation. The road provides a convenient travel route to and from Havre for residents of Rocky Boy and rural lands within the southeast part of the Reservation.

A notable portion of the traffic on Highway 234 is recreational in nature. The route serves picnic areas and campgrounds, cabin sites, and other recreation areas within Beaver Creek County Park Highway 234 also provides access to water-based recreation and fishing in Beaver Creek Reservoir (Lower Lake), Bear Paw Lake, and Beaver Creek itself. The route can be used for direct access to the natural and recreational resources available in the Bears Paw Mountains. Recreational traffic varies throughout the year with the highest use occurring during the summer months corresponding to peak periods of activity in Beaver Creek County Park.

MDT's design traffic data for this section of Highway 234 is summarized in **TABLE 1**. MDT estimates that the current average daily traffic on this section of road is about 580 vehicles per day. As the table shows, the projected average daily traffic volume for the year 2017 at this location is estimated to be 700 vehicles per day. This translates to a simple increase in traffic of about 1 percent per year.

Table 1: Estimated Current and Future Traffic on Highway 234

Current Average Daily Traffic (ADT) 2017 ADT	580 vehicles per day 700 vehicles per day
Design Hourly Volume (DHV)	80 vehicles per hour
Directional Distribution	55%-45%
Percent Trucks	10.7% of all vehicles
All Trucks	58.6%
18 kip Equivalent Single Axle Loads	39.72 (daily)

It should be noted that the current Average Daily Traffic volume is based on short-term "spot" counts of traffic on Highway 234. The short-term data was then adjusted based on traffic volume characteristics collected at a permanent traffic recorder station MDT operates on U.S. Highway 2 west of Havre. Data from the permanent counter allows short-term traffic volume data to be adjusted based on long-term records of daily, weekly, or monthly variations in traffic for roads in the Havre area. This process allows MDT to obtain reasonable estimates of traffic volumes for design purposes. Without the installation of permanent traffic counters at one or more locations on Highway 234, it is impossible to produce an "accurate" record of traffic on the route.

3. Roadway and Bridge Deficiencies

Consistent and predictable driving characteristics are important features of a safe and convenient road. Variances in the physical conditions of the road or inconsistencies in the way the road is designed can have a direct bearing on the overall safety of the roadway and the ability of motorists to negotiate the facility.

The motorist's ability to see ahead is a primary consideration in the safe and efficient operation of a vehicle on a highway. Sharp curves around terrain features or over the crests of hills do not provide sufficient distance for a motorist to see an obstruction in the roadway and to stop if necessary. Such curves are said to lack adequate stopping sight distance. The AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) defines stopping sight distance as the length of roadway ahead visible to the driver. The minimum sight distance on a roadway should be long enough to allow a vehicle traveling at or near the design speed to stop before reaching an object in its path. Although greater lengths of visible road are desirable, the minimum stopping sight distance along every point in the road should be sufficient for a below-average driver or vehicle to stop.

The amount of stopping sight distance required depends mostly on the design speed (the selected speed used to determine the various geometric features of the roadway). The design speed is typically established based on the topography, anticipated operating speed, adjacent land use, and the functional classification of the highway. All of the pertinent features of the highway must be related to the design speed to obtain a balanced and sound design for the facility.

It should be noted that design speed **does not equal** the operating speed or running speed of vehicles on the roadway or the posted speed limit. According to AASHTO's *A Policy on Geometric Design of Highways and Streets*, the "operating speed" is the speed at which drivers are observed operating their vehicles. The "running speed" is the speed at which an individual vehicle travels over a specified section of highway (i.e., a specified distance traveled divided by the time taken by the vehicle to travel the specified distance). The "posted speed limit" is established based on the results of a special engineering and traffic study. The travel speeds of a representative sample of traffic are measured and the individual measurements are plotted so the speed at or below which 85 percent of all observed vehicles were traveling can be statistically determined. This speed is then used to set an appropriate speed limit for a section of highway. The 85th percentile of the distribution of observed speeds is also the most frequently used measure of operating speed.

The appropriate design speeds for various functional classifications of roads in Montana have been established and are published in MDT's "Road Design Manual." Highway 234 is classified as a Rural Major Collector and appropriate design speeds for such roads range from 80 km/h (50 mph) to 100 km/h (60 mph) depending on terrain features.

Requirements for stopping sight distance length, as well as other geometric features such as horizontal and vertical curvature and superelevation (the degree of banking on curves), are directly related to and vary substantially with design speed. Other features, like pavement and shoulder widths and clearances to roadside obstructions, are not directly related to design speed but they affect travel speeds. Highway designers strive to use as high a design speed as practicable to attain the desired degree of safety, mobility, and efficiency within the constraints of environmental quality, economics, aesthetics, and social or political impacts.

Principal Design Controls

Highway 234 in Beaver Creek County Park passes through rolling to mountainous terrain. MDT's "Road Design Manual" states that appropriate design speeds for Rural Major Collectors are 100 km/h (60 mph) for roads in level terrain, 80 km/h (50 mph) for roads in rolling terrain, and 70 km/h (45 mph) for roads in mountainous conditions. The existing posted speed limit is 90 km/h (55 mph). Based on these considerations, MDT established that a design speed of 80 km/h (50 mph) is appropriate for Highway 234. Controlling geometric standards for an 80 km/h (50 mph) design are as follows (from *Figure 12-4: Geometric Design Criteria for Rural Collector Roads* in MDT's "Road Design Manual"):

Minimum Radii = 230 m (755± feet)
Maximum Gradients = 7% (rolling terrain);10% (mountainous terrain)
Minimum Passing Sight Distance = 550 m (1,805± feet)
Desirable Stopping Sight Distance = 140 m (459± feet)
Minimum Stopping Sight Distance = 120 m (394± feet)

Roadway Deficiencies and Alignment Irregularities

Horizontal Alignment. The controlling geometric design criteria listed above were used to evaluate the existing road's alignment. Preliminary engineering analyses determined that the existing horizontal alignment of Highway 234 does not meet the criteria for an 80 km/h (50 mph) design speed. Only seven of the forty-six horizontal curves meet the 80 km/h (50 mph) design speed for radii and/or superelevation (the degree of banking in a curve). This means that nearly 85 percent of all horizontal curves on the existing roadway are deficient. There are seven angle points designed into the existing roadway and four of these locations need horizontal curves to create smooth transitions through the curves. All of the curves on the project are simple curves. The minimum radius for a simple curve and 80 km/h (50 mph) design speed is 230 m (755± feet).

Vertical Alignment. The existing roadway's vertical alignment includes a wide variety of vertical curves and grades as steep as 10.278 percent. These irregularities do not allow enough visibility over the crests of hills for drivers to avoid potential conflicts with obstructions or other users of the road like vehicles, agricultural machinery, bicycles and pedestrians, cattle, and wildlife **PHOTO PLATE 3** illustrates this condition on Rotary Hill. MDT analyses showed that twenty-one of the sixty-three vertical curves (33 percent of all vertical curves) do not meet the design standards for desirable stopping sight distance for an 80 km/h (50 mph) design speed. The deficient curves also include several areas where vertical curves have not been designed into the roadway's alignment. Designing vertical curves into the alignment at these locations would increase driver comfort by providing smooth transitions between differing grades on the road.

Intersections. Various side roads, like Sucker Creek Road, join Highway 234 at skewed intersections Skewed intersections limit sight distance for motorists attempting to enter onto the highway. Such intersections must be reconfigured to provide adequate sight distance.

Road Width. The existing roadway has a paved surface width of 7.2 m (23.6± feet). According to MDT's "Road Design Manual," the minimum paved roadway width for Rural Major Collectors with ADT volumes similar to those on Highway 234 is 8.4 m (27.6± feet).

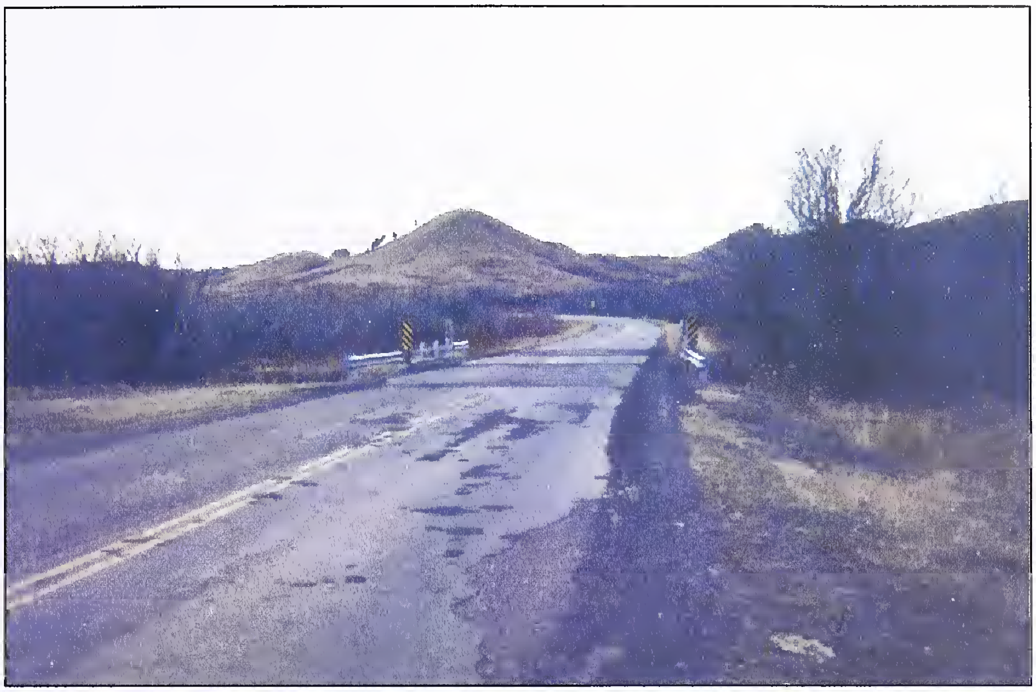
Road Condition. The existing pavement of Highway 234 within the project corridor has a poor driving surface due to excessive cracking and needs overlaying or reconstruction. Most of Highway 234 within the project area has not received any major work except for maintenance activities since 1955. MDT's Geotechnical Section completed a preliminary reconnaissance of the proposed project in August 1998 and identified numerous areas of pavement distress, severe transverse and longitudinal cracking, and pavement rutting along the route. Pavement deterioration and the need to provide a better driving surface were the principal reasons Hill County and MDT initiated planning improvements for Highway 234. **PHOTO PLATE 3** shows the existing road surface conditions of Highway 234.

Culverts/Drainage Facilities. At least three culverts within the project area have a history of maintenance problems. The culvert located about 24.6 km (15.3± miles) south of Havre has a beaver dam upstream blocking flows. The culvert at 28.8 km (17.9± miles) south of Havre has been replaced three times over the years due to its proximity to an underground spring. The culvert at the north end of Rotary Hill has a steep grade and water outfalls into a large plunge pool. Due to these conditions, sloughing occurs on the bank adjacent to the culvert and there is a potential for the road grade to fail in this area. The county has imported fill material on several occasions in an attempt to stabilize the eroding bank.

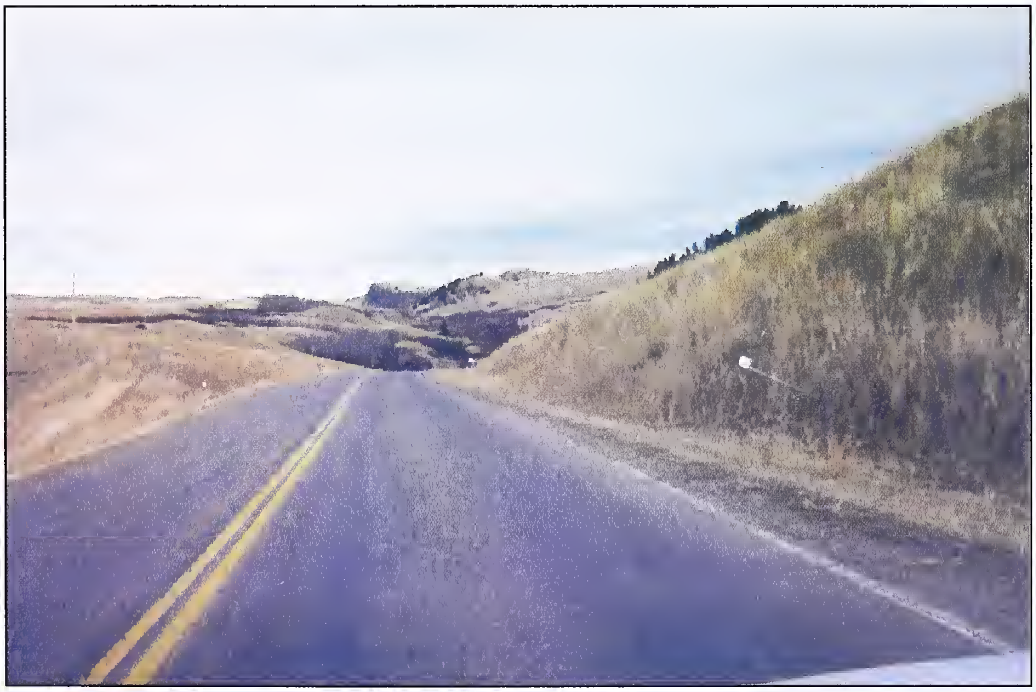
Bridge Deficiencies

MDT periodically conducts detailed evaluations of the condition of bridges on the state highway system and on many off-system roads. The evaluations are used to develop a Sufficiency Rating to measure the condition of each bridge. The Sufficiency Rating is a composite of several ratings of individual bridge items that consider the structural condition and geometry of the bridge. A bridge with a low rating on structural items will be designated as "structurally deficient" and a bridge with a poor rating for geometry items will be designated as "functionally obsolete." Sufficiency Ratings are based on a 100-point scale.

The project area contains three bridges that are proposed for replacement under the proposed



Highway 234 has many sections with severely deteriorated pavement.



Example of limited sight distance on Rotary Hill. This area also has steep roadside slopes.

Photo Page 3: Existing Road Conditions & Geometric Deficiencies

action. These bridges are proposed for replacement due to their deteriorated physical condition, their lack of adequate width, and inadequate hydraulic capacities. Most bridges are only 7.4 m to 7.6 m (24.2± to 24.9± feet) wide and cannot accommodate the proposed 8.4 m (27.6± feet) wide roadway. The northwest abutment of the bridge 21.6 km (13.4 miles) south of Havre and the approaches for bridges at 26.1 km (16.2± miles) and 28.5 km (17.7± miles) south of Havre have sustained damage or washed out during recent storm events. MDT considers these structures to be functionally obsolete due to inadequate hydraulic conditions at the stream crossings.

The locations, bridge types, date of construction, and Sufficiency Ratings for these bridges are listed below. Bridge locations are referenced by their distance from the beginning of Secondary Route 234 at the south edge of the City of Havre.

Location	Structure Type	Date Built	Sufficiency Rating
21.6 km (13.4 miles)	Timber stringers	1961	70.4
26.1 km (16.2 miles)	Concrete T-Beam	1961	68.5
28.5 km (17.7 miles)	Timber stringers	1972	79.8

MDT's Bridge Bureau rated the load-carrying capacity of the bridges within the proposed project at 9-tons. The load limit for bridges in the project area should be 36-tons. Because of the low load rating, any larger-than-normal truckloads are at risk crossing bridges on Highway 234. This may in some extreme cases (like the need for fire protection) put lives and property in jeopardy.

C. Safety

1. Motor Vehicle Accident History of the Project Area

Information about past motor vehicle accidents on Secondary Highway 234 south of Havre was reviewed to identify long-term traffic accident patterns and characteristics. Data from the Safety Management System, the State's computerized accident recording system, provided information about crashes on Secondary Highway 234 from January 1, 1988 through June 30, 2001. The Safety Management System shows that 159 motor vehicle accidents were recorded on Highway 234 from the route's beginning at the south edge of the City of Havre (RP 0.0) to its intersection with Taylor Road (RP 19.3). Of these accidents, 75 accidents occurred on the portion of the route between Havre and the northern entrance to Beaver Creek County Park (RP 9.2). The other 84 accidents occurred within the limits of this proposed highway reconstruction project.

FIGURE 3 shows the locations of reported motor vehicle accidents on Highway 234 within the project area over the January 1, 1988 through June 30, 2001 period. Accident summaries were reviewed to help understand the accident history of the project area during this period. Analyses showed these accident severity characteristics for this section of Highway 234 the study period:

Total Number of Accidents in Section:	84
Number of Fatal Accidents (# fatalities):	1 (1)
Number of Injury Accidents (# injuries):	41 (67)
Number of Property Damage Only (PDO) Accidents:	42

The overall accident rate for Highway 234 in the project area over the January 1, 1988 through June 30, 2001 period was estimated to be about 3.36 accidents/million vehicle miles of travel (MVMT). This compares to a statewide average of about 1.7 accidents/MVMT for all routes on the Secondary system during the same time general time period. The overall accident rate on Highway 234 within the project area was about two times higher than that of other Secondary Routes in Montana during the study period.

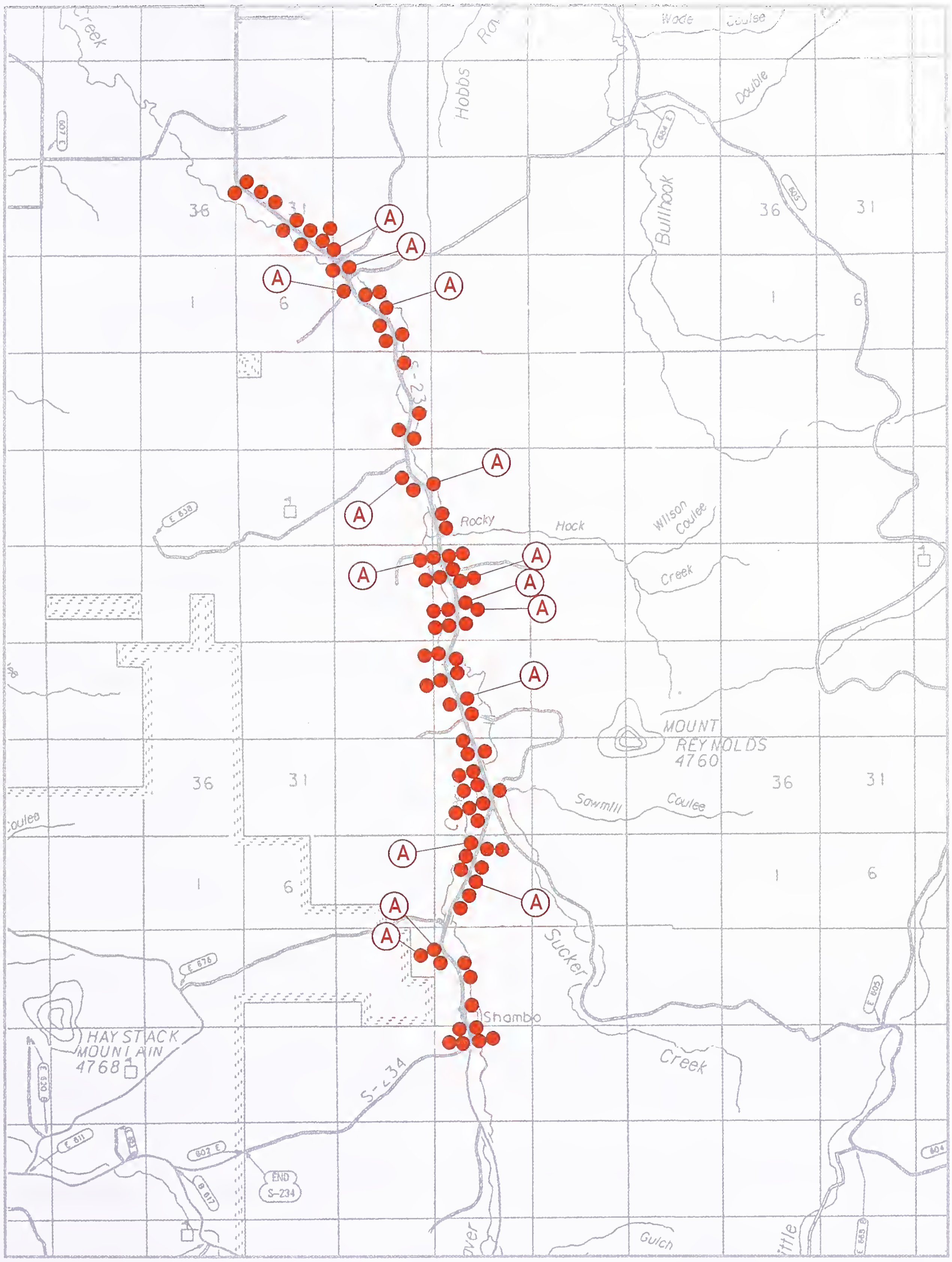
The calculated accident severity index for the accident study period was 2.59 and the accident severity rate was determined to be 8.70 as compared to a statewide average of 4.49 for all routes on the secondary system. The accident severity rate for the project area was approximately twice as high as that of other state secondary routes during the analysis period. The severity index and severity rate are statistics commonly used by MDT as measures of the overall severity of accidents on a particular road segment or route based on the number and degree of injuries recorded during a given period. The severity rate is calculated by multiplying the accident rate times the severity index.

In November 1998, MDT conducted a road safety audit of Secondary Highway 234 from the route's beginning at the south edge of the City of Havre to its intersection with Taylor Road. A road safety audit is a formal method of investigating the accident potential of an existing roadway or the proposed road design. The audit was done to identify safety deficiencies or problems that are not compatible with the function of the roadway or that interact with roadway users. Key findings from the road audit are highlighted below.

- Sixteen (16) of the 84 (or 19.0 percent) recorded accidents during the accident study period involved domestic animals (cattle). All but three of the domestic animal accidents happened at night. A summary of the accidents involving domestic animals follows:

Reference Post	Date	Time	Severity	Light Condition
10.1	9/7/91	03:20	PDO	Dark
10.5	9/8/96	21:15	PDO	Dark
10.5	11/27/95	18:00	1 injury	Dark
10.7	9/17/88	20:50	PDO	Dark
10.7	9/17/94	09:49	PDO	Daylight
12.5*	10/21/89	07:50	PDO	Daylight
13.0	9/6/90	21:00	PDO	Dark
13.2	9/16/89	00:01	PDO	Dark
13.4	10/2/88	17:45	PDO	Daylight
13.4	9/17/89	01:00	PDO	Dark
13.9	9/5/90	21:20	1 injury	Dark
14.5	9/3/97	21:00	PDO	Dark
15.3	10/26/97	01:00	5 injuries	Dark
15.5	9/25/95	20:20	PDO	Dark
17.9	9/30/99	00:15	1 injury	Dark
18.9	9/27/96	13:00	PDO	Daylight

* This accident was not a collision with a cow but was caused by a motorist running off the road to avoid hitting the animal.



NOTE: Accidents shown occurred over the period of January 1, 1988 through June 30, 2001. All locations are approximate.

Ⓐ = Accident Involving Domestic Animal

Figure 3:
Reported Motor Vehicle Accident Locations
RP 9.3 - 19.3

- There is a high occurrence of single vehicle accidents in the project area.

- There is a high occurrence of nighttime accidents within the corridor.

- There is a high involvement of young (age 15-24) drivers involved in the motor vehicle accidents within the project area. MDT's road safety audit showed that 52 percent of the accidents that occurred on Beaver Creek Road between Havre and Taylor Road involved drivers less than 24 years of age. Since 1998, 15 of the 40 recorded accidents between Havre and Taylor Road have involved drivers younger than 24 years old.

- Alcohol was a notable contributing factor in many recorded accidents. MDT's road safety audit showed alcohol was a factor in 44 percent of all the reported accidents on Beaver Creek Road between Havre and Taylor Road over the 1988 through 1998 period. Since 1998, 9 of the 40 recorded accidents between Havre and Taylor Road listed alcohol as a contributing factor.

- There is a high incidence of accidents where vehicles left the roadway. Run-off-the-road rollover accidents were common occurrences among recorded accidents.

D. Legislation Mandating Action

1. Changes in Maintenance Responsibility on Highway 234

The 56th Legislature made major changes to Montana's Secondary Highway Program during the 1999 session. The signing of Senate Bill 333 into law changed the long-standing Secondary Program by requiring MDT to assume maintenance responsibility for all paved Secondary Routes by January 2001. MDT maintenance of paved secondary routes (like Secondary Highway 234) includes winter maintenance, pavement maintenance, striping and signing, the maintenance of safety devices, and maintenance of drainage and roadside activities.

The maintenance of Secondary Highway 234 from the City of Havre south to Taylor Road became MDT's responsibility in January 2001. This means MDT is obligated to maintain, preserve, and enhance (if needed) the roadway and associated facilities to ensure continued and safe use by the traveling public. Even if improvements were not proposed for Highway 234 in Beaver Creek County Park, MDT has an obligation to ensure that travel on the route can be accomplished in a safe and efficient manner.

2. Montana's "Open Range" Fencing Law

Hill County contracts with local ranchers to graze cattle on lands within Beaver Creek County Park from the Tuesday after Labor Day until Christmas each year. Between 2,500 and 3,000 head of cattle may be present within the park at any given time during September, October, and November. The boundaries of the park are fenced; however, in most locations no fencing exists adjacent to Highway 234. Cattle range freely and may be on or adjacent to the roadway at any time during the day. Hill County's Park Board has established policies for the management of livestock grazing in the park. During the grazing season, the County posts signs advising motorists that cattle are in the park and urging motorists drive with caution.

MDT's 1998 safety audit concluded that Highway 234 in the project area has a higher than normal occurrence of accidents involving domestic animals. The accident history presented earlier in this Part supports the position that open range grazing poses a hazard to motorists. Based on the number of accidents involving livestock, the proposed action is subject a state law (**60-7-101** through **60-7-103, M.C.A.**) requiring fencing for highway system reconstruction projects in open range areas where livestock present a hazard to motorists. According to **60-7-103, M.C.A.**,

> "(1) The department (MDT) shall fence the right-of-way of any part of the state highway system that is constructed or reconstructed after July 1, 1969, through open range where livestock present a hazard to the safety of the motorist. Where a fence is constructed, adequate stock gates or stock passes, as necessary, shall be provided to make land on either side of the highway usable for livestock purposes."
>
> "(2) The department (MDT) shall erect a fence in every high-hazard area as promptly as possible, and ....."

The statute also defines "high-hazard area" for open range situations as follows:

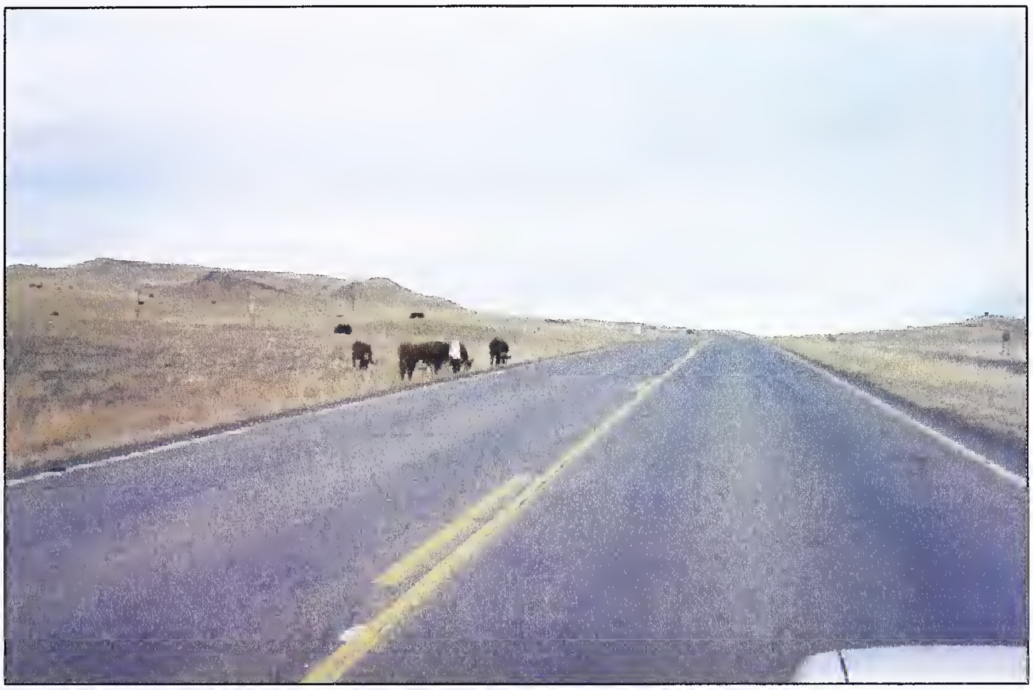
> A "high-hazard area" is a segment of the primary highway system passing through open range where livestock moves on or across the highway often enough, in enough numbers, and with enough ease of access that such animals create a significant traffic safety hazard.

A copy of the statute is provided in **APPENDIX C**.

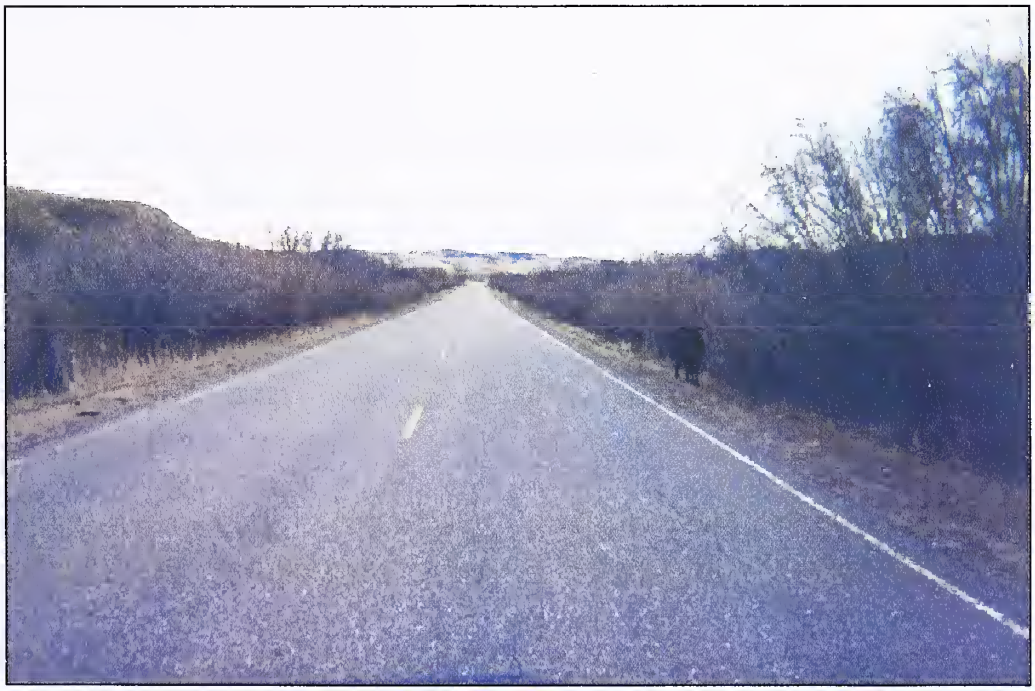
MDT's safety audit concluded the accident history of the project corridor clearly demonstrates open range grazing poses a hazard to motorists and that fencing the new highway right-of-way must be included with the proposed action. As a result, MDT proposed to fence the right-of-way corridor during 1999 to comply with **60-7-103 (1), M.C.A.**

However, significant local opposition to highway fencing in Beaver Creek County Park occurred after MDT proposed fencing for the new highway corridor. MDT and Hill County received a petition opposing highway fencing signed by nearly 1,500 people during the summer of 1999. In response to obvious local concerns over the fencing proposal, the County Commissioners formed the Highway 234 Advisory Committee to help address and resolve fencing issues in Beaver Creek County Park. The advisory committee was charged with examining ways to meet MDT's mandated requirement to fence the road while still meeting local desires to maintain cattle grazing and minimize effects on recreational activities in the park.

Although the advisory committee collectively developed and analyzed several options for fencing the highway, the committee's foremost recommended action was seeking to amend the state law requiring fencing. As a result of local lobbying efforts, area legislators drafted and introduced a



Seasonal grazing occurs from after Labor Day until Christmas. Free-ranging livestock often graze near the edge of the road and cross the highway to water in Beaver Creek.



Dense riparian vegetation along Beaver Creek often makes cattle difficult to see for oncoming motorists. Note cow along the right side of road.

Photo Page 4:
Open Range Grazing Along Highway 234

bill (known as Senate Bill 259) during the 2001 Legislature to exempt Highway 234 from the livestock control fencing required by the "open range" fencing law.

During the 2001 Legislative session, Senate Bill 259 was debated and passed. The bill outlines provisions that no longer require MDT to install fencing for highway reconstruction projects through county parks if other measures, including the development of an accident mitigation plan, are implemented to make the road safer for motorists. Senate Bill 259 was signed into law April 5, 2001 and there is no longer a statutory requirement to fence the right-of-way corridor with this proposed highway reconstruction project in Beaver Creek County Park. A copy of Senate Bill 259 and a summary of bill actions are provided in **APPENDIX C**.

MDT and Hill County are currently developing a Safety Mitigation Plan for Highway 234 through Beaver Creek County Park to improve safety along the route, to reduce risks, and to comply with the intent of Senate Bill 259. The revisions to the law take effect October 1, 2001.

E. Overall Conclusions on Need

The existing roadway and bridges have many physical deficiencies that contribute to reduced safety for users of Highway 234. Several of these deficiencies are related to the design of the roadway and can be corrected only through reconstruction.

Reconstructing this segment of Highway 234 would substantially improve road safety by bringing the design of the highway into compliance with MDT's current design standards for Rural Major Collectors with design speeds of 80 km/h (50 mph). The width of the roadway's surface would be increased from 7.2 m (23.6± feet) to 8.4 m (27.6± feet). Adequate stopping sight distance would be provided at twenty-one deficient vertical curves and thirty-nine deficient horizontal curves would be rebuilt to meet the criteria for an 80 km/h (50 mph) design speed. The new bridges associated with this proposed action would be wider than existing structures, have increased load carrying capacities, and improved hydraulic conditions at each crossing.

As currently practiced, livestock grazing in Beaver Creek County Park presents a notable hazard to the users of Highway 234. This conclusion is supported by the fact that accidents involving livestock accounted for nearly 19 percent of all reported accidents on the section of Highway 234 over the period beginning on January 1, 1988 and ending on June 30, 2001. State law obligates MDT to consider fencing the highway right-of-way and/or identify other innovative ways to reduce the hazard posed by livestock grazing along this section of Highway 234.

III. Alternatives Considered

III. Alternatives Considered

A. Introduction

This Part describes the alternatives considered to address the transportation and other needs identified in Part II. Alternatives to the proposed action are the various activities to be undertaken to meet the purpose and the need for the project.

This section describes the proposed improvements that comprise the Preferred Action. The "Preferred Action" is the alternative which MDT and Hill County believes would best meet the reasons for undertaking the project, giving consideration to economic, environmental, technical and other factors.

This Part also describes the range of alternatives initially considered for the proposed action and discloses reasons for the rejection of alternatives.

B. No Action Alternative

The No Action alternative (also known as the "no build" alternative) involves no major work to improve or correct deficiencies that exist on Highway 234 or with the three bridges in the project area that cross Beaver Creek. This alternative would not alter the alignment or include major improvements to correct identified deficiencies related to the geometry of the existing highway or with the condition of the existing roadway or bridges. However, these transportation facilities would continue to receive the minor actions needed to maintain them for public use. Existing safety and operational problems would continue.

Livestock grazing would continue to occur in Beaver Creek County Park. The assumption of maintenance responsibilities for the route and recognized traffic safety concerns (including those posed by past livestock grazing practices in the park), obligate MDT and Hill County to investigate and implement measures to make Highway 234 safer for its users. An amendment to the State's "open range" fencing law no longer requires MDT to fence the highway corridor. However, MDT and Hill County must develop and implement a Safety Mitigation Plan for Highway 234 within Beaver Creek County Park instead of fencing the roadway corridor. Therefore, the No Action Alternative would also include the implementation of measures associated the required Safety Mitigation Plan. An important element of the Plan is the provision of livestock watering sources away from the highway. Hill County has initiated planning for the water developments and MDT has committed to fund these installations.

The No Action alternative would not impact any developed land uses within the project area or change the appearance of the highway corridor. The ability for visitors to park and recreate at any location along the road would be not be impaired.

The No Action alternative does not meet the purpose and need for the project and has been rejected from further consideration. The No Action alternative does, however, provide a baseline against which the Preferred Action (or other alternatives) can be compared. The environmental effects of the No Action alternative will be discussed in Part IV as a means of comparing and contrasting the impacts of MDT's Preferred Action.

C. Preferred Action and Associated Features

1. Overview

The Preferred Action is to complete improvements to Highway 234 within Beaver Creek County Park. The road would be reconstructed as a safe and efficient two-lane road and its design would be substantially improved over that of the existing facility.

Montana highways and bridges are designed to meet or exceed recommended minimum geometric standards. These geometric standards are based on design policies and guidelines established by MDT and the AASHTO. The proposed project would be developed to conform to MDT's "Road Design Manual" and "Bridge Design Standards" and AASHTO's Standard Specifications.

The proposed improvements would be made generally following the existing alignment of the road, although the road would be shifted slightly at various locations to provide a horizontal alignment that meets geometric criteria for an 80 km/h (50 mph) design speed. Likewise, the vertical alignment would be adjusted to eliminate substandard vertical curves. Three bridges over Beaver Creek would be reconstructed on or near the existing alignment.

Site preparation work would include removing the old pavement, clearing, and grading. Drainage structures with adequate roadside ditches to accommodate runoff from the roadway would be installed and slopes would be stabilized as needed and revegetated. V-ditches would be provided adjacent to the highway to convey runoff.

Advisory and regulatory signs would be installed according to standards outlined in the *Manual on Uniform Traffic Control Devices* (MUTCD). Guardrail would be placed where warranted by roadside slope conditions or to reduce encroachment on adjacent wetlands.

Construction costs for rebuilding Highway 234 through Beaver Creek County Park are currently estimated to be about $4.6 million. Traffic would be maintained on the existing facility and appropriate signing, flagging and detours would be used to minimize delays to highway users.

Consistent with the intent of Senate Bill 259, the Preferred Action also includes the installation of facilities and implementation of other measures by MDT that are necessary elements of the Safety Mitigation Plan for Highway 234 in Beaver Creek County Park.

2. Design Speed/Posted Speed Limit

Highway 234 in Beaver Creek County Park would be designed to an 80 km/h (50 mph) design speed. The controlling geometric standards for an 80 km/h (50 mph) design are shown in *Figure 12-4: Geometric Design Criteria for Rural Collector Roads* of MDT's "Road Design Manual" would be followed.

The posted speed limit for this section of the route is 90 km/h (55 mph) and would remain unchanged with the Preferred Action. The Montana Transportation Commission has endorsed a policy whereby the existing speed limit on Highway 234 (and other state Secondary Routes) will remain in place even though the maintenance responsibility for the roadways is shifted to MDT.

Local authorities may request MDT (or hire a professional engineer) to perform an engineering and traffic investigation to determine if a special speed zone is warranted at any location on the route. The Montana Transportation Commission will determine the appropriate speed limit based on the results and recommendations of the engineering and traffic study.

3. Typical Road Cross-Sections

The proposed typical road cross-sections are presented in **FIGURE 4**. Throughout the project, the roadway would have an 8.4 m (27.6± feet) wide finished top surface accommodating two 3.6 m (11.8± feet) wide travel lanes and two 0.6 m (2.0± feet) wide shoulders. The new road would be constructed with a plant mix bituminous (asphalt) surface over the top of a crushed gravel base course. The pavement of the new road would have a 20-year design life.

4. Design Exceptions

Several design exceptions are proposed to avoid or minimize environmental impacts on Beaver Creek County Park. MDT would design and construct surfacing inslopes throughout the project at 5:1 for the first 2.7 m (8.8± feet) away from the road's edge instead of at 6:1. MDT typically uses a ratio to describe slopes adjacent to the roadway (i.e. a 5:1 slope means that for every 5 units of horizontal distance outward from the top of the road's subgrade, the slope would decrease in height by 1 unit). "Inslopes" are the roadside slopes created by connecting the road's subgrade shoulder to the ditch bottom.

MDT would also adjust fill slopes (the roadside slopes intersecting the natural ground line) from 4:1 to 2:1 at various locations throughout the project to minimize effects to Beaver Creek and adjacent wetlands. For traffic safety reasons, guardrail would be installed in the areas where steepened fill slopes are proposed.

An exception to design standards for maximum grade would be necessary on Rotary Hill. The existing grade on the road is about 10.3 percent and the proposed new grade would be about 9.1 percent. MDT proposed this design exception because the cost of grading and environmental effects can be reduced without compromising road safety.

Three of the vertical curves on the project would be reconstructed to provide only the minimum stopping sight distance of 120 m (394± feet) instead of the desirable stopping sight distance of 140 m (459± feet).

5. Stream Crossings/Bridges

Three existing bridges over Beaver Creek would be replaced with new structures. The proposed bridges would have either cast-in-place concrete flat slab or shallow pre-stressed concrete superstructures. The approximate dimensions of proposed replacement bridges under the Preferred Action are listed below. The structures are identified by their locations south of the City of Havre and by the project stationing established by MDT for design purposes.

- **21.6 km (13.4 miles) south of Havre (Station 72+86.00)** - The existing 7.6 m-wide by 9.45 m-long (24.9-foot-wide by 31.0-foot-long) timber bridge would be replaced by a new three-span structure 27.3 m (89.6± feet) long and 9.0 m (29.5± feet) wide between the faces of the new bridge rails. The new structure would have two 7.3 m (24.0± feet) long end spans and a 9.1 m (29.8± feet) long center span supported on end bents and two piers consisting of driven pipe piles with concrete caps.

- **26.1 km (16.2 miles) south of Havre (Station 117+21.00)** - The existing 7.4 m-wide by 7.62 m-long (24.3-foot-wide by 25.0-foot-long) concrete T-beam bridge would be replaced by a three-span structure. The proposed bridge would have the same overall dimensions as the structure planned for the crossing 21.6 km (13.4 miles) south of Havre.

- **28.5 km (17.7 miles) south of Havre (Station 143+78.15)** - The existing 8.9 m-wide by 7.32 m-long (29.2-foot-wide by 24.0-foot-long) timber bridge would be replaced by a new three-span structure. The proposed bridge would be 18.2 m (59.7± feet) long and 9.0 m (29.5± feet) wide between the faces of the new bridge rails. The new structure would have two 5.6 m (18.4± feet) long end spans and a 7.0 m (23.0± feet) long center span supported on end bents and two piers consisting of driven pipe piles with concrete caps.

The new bridges would be constructed at virtually the same location as the existing structures and have similar horizontal and vertical alignments. The roadway on both ends of the new bridge would remain 9.0 m (29.5± feet) wide throughout the approach rail and terminal end sections and then transition to match the proposed 8.4 m (27.6± feet) wide road beyond the bridge ends.

Because the proposed structures would be built at nearly the same locations as the existing bridges, MDT would provide detours and temporary bridges at each crossing to maintain traffic.

6. Cattle Guards

Existing cattle guards would be replaced with the proposed project. Additionally, a cattle guard would be installed at the existing cross fence location (T-29-N, R-16-E, SE¼NW¼ of Section 9) near Bear Paw Lake and new cattle guards would be provided at two other locations to be specified by Hill County. The county has tentatively identified a location south of the High Road intersection (T-30-N, R-16-E, NW¼NW¼ of Section 5) and a location north of Rehm Road Junction (T-30-N, R-16-E, NW¼NW¼ of Section 21) as the sites for new cattle guards.

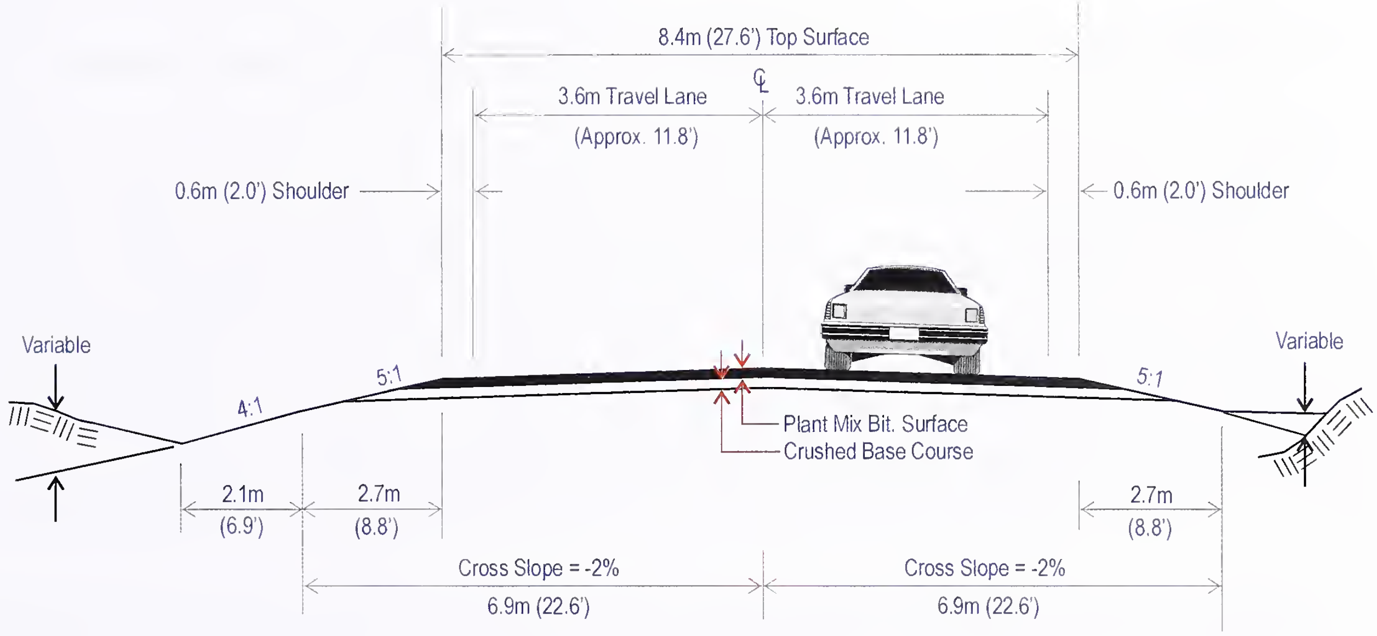


Figure 4:
Typical Road Cross Section
Highway 234

7. Information and Warning Signs

During the grazing season, signs advising motorists of the presence of livestock in Beaver Creek County Park would be posted on Highway 234 at the beginning and end of the project and on other major public roads entering the park. Hill County may install other supplementary warning signs or warning lights if deemed necessary.

MDT would install wildlife crossing warning signs at reasonable intervals along the project corridor to advise motorists of the potential collision hazards presented by deer. MDT would also consult maintenance records to determine if high numbers of deer kills have been noted in any specific areas of the highway corridor. This information would be used to determine the need for any special wildlife crossing warning signs.

8. Water Developments for Livestock Away from the Road

The provision of additional watering sources for livestock away from Highway 234 is a viable way to improve traffic safety when grazing occurs within Beaver Creek County Park. Beaver Creek, which is generally adjacent to Highway 234, provides the principal source of water for livestock. Developing springs at strategic locations in upland areas away from the highway would provide alternate watering locations and reduce the need for cattle to cross the road to water in the stream. Livestock attractants, like salt and energy/protein/mineral supplements, would be used in conjunction with the new water developments to entice cattle away from the road. These actions would provide other indirect benefits like improving water quality in Beaver Creek, reducing impacts to riparian vegetation caused by livestock, and more efficiently distributing livestock within the park.

Due to the anticipated safety benefits for users of Highway 234, MDT proposes to include the development of springs away from the highway as part of the Preferred Action. This proposed project activity is justified by **60-7-103, M.C.A.** that states:

> "........**water facilities**, and cattle guards may be installed where necessary to make the land on either side of the highway useable for livestock purposes or where a public right-of-way intersects the state highway..."

The Highway 234 Advisory Committee identified 12 locations in or immediately adjacent to Beaver Creek County Park where developing springs is the most feasible. These locations are shown on **FIGURE 5**. The following spring developments would be advanced with the Preferred Action:

Cable Gate: T-30-N, R-16-E, SE¼NW¼ of Section 8
Kinsella 1: T-30-N, R-16-E, SE¼NW¼ of Section 17
Kinsella 2: T-30-N, R-16-E, SW¼NE¼ of Section 17
Duke Road North: T-30-N, R-16-E, SE¼SW¼ of Section 16
Duke Road South: T-30-N, R-16-E, SW¼NE¼ of Section 21
Keiffer Coulee: T-30-N, R-16-E, NE¼SE¼ of Section 20

Rotary Hill North: T-30-N, R-16-E, SW¼SE¼ of Section 21
Rotary Falls East: T-30-N, R-16-E, NE¼NE¼ of Section 28
Anderson Place: T-30-N, R-16-E, NW¼NW¼ of Section 33
Scout: T-30-N, R-16-E, SW¼SW¼ of Section 33
Taylor Road North: T-29-N, R-16-E, NW¼NW¼ of Section 16
Taylor Road South: T-29-N, R-16-E, SE¼NW¼ of Section 16

Hill County has also developed a well at Camp Kiwanis (T-29-N, R-16-E, NE¼NW¼ of Section 9) and is in the process of installing a short pipeline and stock tank to water livestock east of the developed area and Highway 234.

A water line from the stream to a residence outside Beaver Creek Park (T-31-N, R-16-E, NW¼NW¼ of Section 31) is also equipped with a faucet tap. A stock tank could also eventually be installed at this location to water livestock in the north end of the park.

MDT would pay the costs of installing the stock watering facilities but Hill County would be responsible for planning and constructing the water developments.

9. Beaver Creek Fisheries Enhancement Activities

Past road construction has impacted Beaver Creek by cutting off meander bends to straighten the stream channel and a perched highway drainage culvert on Rotary Hill has caused severe erosion and contributed substantial amounts of sediment to the stream system. In a cooperative effort, MDT and the Montana Department of Fish, Wildlife & Parks (MDFWP) retained by Joseph Urbani & Associates, Inc. during 1999 to prepare a Stream Assessment and Feasibility Report for Beaver Creek. The report identified potential stream remediation work that could be incorporated with the Preferred Action including relocating the Beaver Creek channel in the vicinity of Rotary Hill, developing pools and channel constrictions to provide deep-water habitat in the stream, and installing riparian fencing at selected locations.

To eliminate an abrupt grade change in Beaver Creek and a plunge pool, MDT would lengthen the existing culvert and modify the inlets and outlets of the pipe. The inlet for the culvert would be lowered and a rock weir would be placed in Beaver Creek about 104 m (340 feet) upstream from the culvert. The outlet of the culvert would be extended by 2.5 m (8.2 feet) and a scour hole would be constructed near the outlet.

MDT and the MDFWP have discussed ways to improve fish habitat in Beaver Creek in the vicinity of existing highway crossings by developing deep-water habitat and providing riffle/pool complexes along Beaver Creek. MDT has coordinated with the MDFWP and agreed to provide a 5 m (16.4 feet) long by 1 m (3.3 feet) wide by 1 m (3.3 feet) deep hole undercutting a heavily vegetated bank about 50 m (164 feet) downstream of the bridge located 21.6 km (13.4 miles) south of Havre (at Project Station 72+86.00).

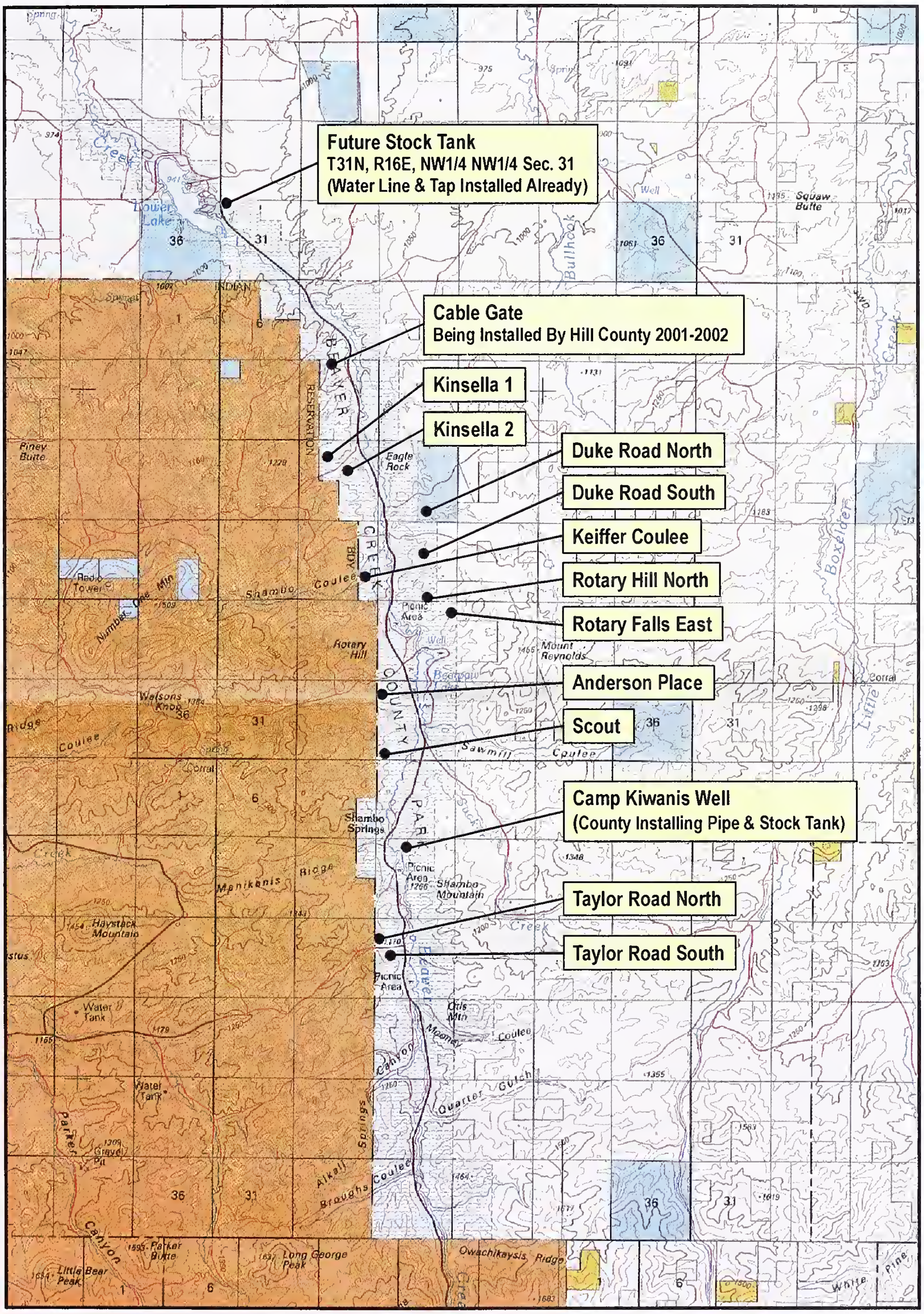


Figure 5: Proposed Water Developments

D. Build Alternatives Considered But Rejected

1. Mill/Fill and Overlay of Highway 234

MDT's (and Hill County's) initial preference for Highway 234 was to establish a longer lasting riding surface by pulverizing, milling and filling, or overlaying the existing road surface. The existing width of the roadway would be maintained, substandard horizontal or vertical curves would be reconstructed, and roadside slopes would be flattened. The overlay work was proposed as a means of remedying the excessive cracks in the existing surfacing.

During 1999, MDT compared the costs and benefits of doing the overlay work with those of totally reconstructing the roadway. MDT dropped its initial plans to overlay Highway 234 because the cost of such work was only about $400,000 less than the estimated cost of completely reconstructing the roadway. MDT viewed this cost difference as negligible given the greater benefits that could be realized by fully reconstructing the route. Such benefits include a slightly wider road, an improved driving surface, and an alignment satisfying applicable geometric design standards.

2. Overlay the Existing Highway

The existing roadway surface could be overlaid without improving its alignment or any of the existing bridges. This option was rejected because it would not provide desirable stopping sight distance at substandard vertical curves and would not include measures to address other geometric conditions that have contributed to motor vehicle accidents on the route. This alternative would not meet the need to improve the condition and load bearing capabilities of the bridges on Highway 234. Most importantly, this option does not satisfy MDT's and Hill County's inherent obligations to increase the traffic safety on the route.

3. Reconstruct the Highway But Eliminate Grazing

This alternative would reconstruct Highway 234 and its associated bridges as proposed by MDT but would require Hill County to cease livestock grazing within Beaver Creek County Park. Traffic safety would be enhanced by rebuilding the road to satisfy geometric design criteria for the selected design speed and by eliminating the presence of livestock in the park. If grazing were eliminated, the "open range" fencing law (**60-7-103, M.C.A.**) and its subsequent revisions by the 2001 Legislature would no longer apply. MDT would not be required to fence the right-of-way or to implement a Safety Management Plan for Highway 234 in the park.

Since livestock grazing fees comprise a significant amount of revenue ($40,000+ annually) for operating and maintaining Beaver Creek County Park, Hill County would have to rely on other county funds or taxes would have to be increased to offset the loss of grazing fees. If Hill County lacked alternate financial means to operate and maintain the park, other public or private funding sources would have to be found. Approximately twenty local ranchers would have to make alternate provisions for grazing livestock during the fall months if the park were no longer available for grazing. Alternate locations for grazing livestock in the area may not be available for these ranchers. If other areas were available for livestock grazing, they may be available only at a higher cost. Hill County would continue to receive revenue from haying land within the park.

This alternative was rejected from consideration primarily due to the economic hardships it would impose on Hill County, local ranchers, and taxpayers.

4. Reconstruct the Highway and Fence the Highway Corridor

This alternative would reconstruct Highway 234 and its associated bridges as proposed by MDT but employ other types of permanent or temporary fencing in an attempt to keep cattle off the highway and its roadside. Prior to the 2001 Legislative session, MDT was obligated under **60-7-103, M.C.A.** to include fencing with its proposed highway reconstruction project in Beaver Creek County Park. As discussed in Part II, MDT initially proposed to include a continuous highway along the roadway as part of its reconstruction project.

Due to public opposition to MDT's proposal and intense public interest, the Hill County Commissioners established an advisory committee to study ways to consider MDT's mandated requirement to fence the road and address local desires to maintain cattle grazing and minimize effects on Beaver Creek County Park. As part of their work, the advisory committee identified and evaluated several fencing options including: 1) installing fences at the edge of roadway clear zone as proposed by MDT; 2) using east-west cross-fencing at various locations in the park; 3) installing fencing at varying distances from the highway; and 4) using temporary fencing during the grazing season. Each fencing option considered by the advisory committee satisfied the basic objective of keeping cattle off the roadway to various degrees and each option was found to present its own set of unique environmental effects.

Ultimately, the Highway 234 Advisory Committee recommended the Hill County Commission adopt a proposal that would place the fence varying distances from the roadway based on its location within Beaver Creek County Park. Under the recommended fencing concept, cattle would be excluded from camping areas and other recreation sites in the park and a considerable portion would not be visible from the road. After considering public comments on various fencing proposals in May 2000, the Hill County Commissioners adopted the Advisory Committee's recommendation as their preference if legislative efforts to amend the open range fencing law were unsuccessful.

This alternative was dropped from consideration because there is no longer a statutory requirement to fence the right-of-way corridor for this highway reconstruction project. The 2001 Legislature amended **60-7-103, M.C.A.** to include provisions that no longer require MDT to install fencing for highway reconstruction projects through county parks if other measures, including an accident mitigation plan, are implemented to make the road safer for motorists.

5. Build the Highway on a New Location

Building Highway 234 on a new location in the "uplands" of Beaver Creek County Park or even outside the park was suggested during the development of this proposed project. This option would require that an entirely new highway corridor be built along all or portions of the park's east or west boundaries. The highway corridor would be fenced to minimize or eliminate the livestock hazard to Highway 234 users and the entire bottomland within the park would be available for recreation and other park uses (including grazing). The existing highway would have to remain in place to provide access to recreation sites within the park.

Although detailed studies of alternate locations for the highway were not performed, it is obvious that building on a new location would avoid numerous crossings of Beaver Creek. However, the costs of constructing an entirely new road and the level of environmental disturbance within other areas of Beaver Creek County Park would far exceed those associated with MDT's Preferred Action. The costs of highway construction on a new location could exceed $1.6 million/km ($1.0 million/mile) as compared to the estimated $0.98 million/km ($0.61 million/mile) for reconstruction following the existing alignment. Future maintenance of the old road and its bridges would remain with the County rather than being assumed by MDT since the old highway and its bridges would not be on the Secondary System. Building the new road would also disrupt previously undisturbed portions of the park and road cuts and fills associated with the highway could cause significant changes in the visual appearance of the park.

For the reasons discussed above, building Highway 234 on a new location within Beaver Creek County Park was rejected from consideration.

E. Other Alternatives Considered But Rejected

1. Drop Highway 234 From the Secondary System

Hill County would have to request MDT to drop the project. This would be a significant change in direction since improving Secondary Highway 234 was previously designated as the County's number one priority for reconstruction and they demonstrated their commitment to completing the project through past agreements with MDT. If actions were taken to drop Highway 234 from the secondary system, the possibility exists that Hill County could be held financially accountable for a portion of the substantial amount of state highway funds already spent on the design work for the road improvement project.

If Highway 234 were dropped from the state highway system, the route would revert back to an "off-system" county road and Hill County would resume all responsibility for its operation and maintenance. The Hill County Commissioners have previously indicated that the high costs of maintaining and upgrading the roadway was a major reason for getting the road included on the state highway system. If county funds for maintaining the route are limited, it is inevitable that the road's condition would continue to deteriorate. Due to a lack of funds, it is likely that the traveling public would continue to be exposed to the safety concerns associated with the existing roadway and seasonal grazing within Beaver Creek County Park.

2. Do Nothing and Allow Highway 234 to Return to Gravel

A few comments heard at the June 1999 public meeting and submitted to MDT called for no action to improve Highway 234 and for the road to be returned to a gravel surface. It is assumed that the principal reasons for such a recommendation were local concerns over high travel speeds on Highway 234 and the costs of reconstructing the road. Unless efforts were made to remove the existing pavement and provide a uniform gravel surface, this suggested action would produce many years of driving on the deteriorating pavement. Eventually, the existing pavement would deteriorate to a point where it was no longer safe and the remnants of the pavement would have to be removed and so a uniform gravel surface could be constructed. The quality of travel on the facility would not be unacceptable to either MDT or Hill County.

This suggested action was rejected as an alternative because it fails to recognize that significant investments of public funds have already been made to build and maintain the paved roadway and its associated features. Such an action would also require continued efforts on behalf of Hill County and MDT to maintain a suitable driving surface on the gravel roadway. Additionally, if the road were unpaved, safety concerns would still exist over travel speeds, excessive dust could be generated in the vicinity of recreation sites, and sediments from the road could cause adverse effects on the water quality of Beaver Creek. A gravel surface would be less well suited for the types of vehicles and uses that presently occur on Highway 234. Neglecting the condition of the highway and returning the road to a gravel surface is not consistent with Hill County's intentions to reconstruct the roadway and would not be in the best interest of the state's secondary system.

IV. Affected Environment and Environmental Impacts

IV. Affected Environment and Environmental Impacts

A. Introduction

Part IV describes the social, economic, and environmental conditions and resources affected by the proposed reconstruction of Highway 234 within Beaver Creek County Park. Resources likely to be affected were identified through agency contacts, literature reviews, research and field studies, and public involvement activities. Contacts with these interested parties also helped identify issues or concerns relevant to the proposed action. Important issues for the proposed reconstruction of Highway 234 are highlighted below:

- land ownership and use;
- potential impacts to the character and recreational use of lands in Beaver Creek County Park;
- effects on threatened, endangered, and sensitive wildlife species;
- effects on cultural and historic features in the project area; and
- impacts of the project on the local economy.

These and other relevant issues are addressed in the following sections.

This part of the EA also discusses the potential environmental effects of implementing either MDT's Preferred Action or taking no action. As indicated in Part III, the No Action Alternative is being analyzed for the purposes of providing a contrast or comparison with the Preferred Action. A brief description of the existing environmental conditions in the project area is presented to help identify any changes in these conditions that may result from the implementation of these alternatives. Only the impacts with a reasonable possibility for individual or cumulative impacts are assessed in this Part. Where appropriate, measures to mitigate the adverse environmental effects of the Preferred Action are discussed in each section. If the Preferred Action is advanced, then MDT will implement the mitigating measures identified in this Part.

B. Impacts to the Natural Environment

1. Impacts to Landforms, Geology and Soils

Physiography and Landforms. The project area is located in north central Montana and extends southward from the broad Milk River Valley at Havre towards the Bears Paw Mountains. The dominating landforms of the project area are rolling, grass-covered plains dissected by numerous coulees with intermittent drainages. Beaver Creek and its riparian corridor form the bottom of a relatively narrow valley. Highway 234 typically parallels the stream through the center of the valley.

Surface elevations in Beaver Creek County Park generally increase from north to south. The elevation of Highway 234 is about 946 m (3,103± feet) at the north end of the project and gradually increases to about 1,171 m (3,842± feet) at the route's intersection with Taylor Road. Within the project area, adjacent hills range from about 975 m (3,200± feet) to 1,280 m (4,200± feet) in elevation and the highest ridges surrounding the park exceed 1,372 m (4,500± feet). Baldy Mountain in the Bears Paw Mountains exceeds 2,103 m (6,900± feet) in elevation.

Project Area Geology. Hill County is on the east side of a broad uplifted area referred to as the Sweetgrass Arch. Thick layers of sedimentary bedrock formations (including the Bearpaw Shale, Judith River, Claggett Shale, and Eagle Sandstone, Telegraph Creek Formations and the Colorado Group) underlie the County. Igneous and volcanic rocks pushed these sedimentary rocks upward to form the Bears Paw Mountains.

The geology of the project area is the result of volcanic and glacial action. The Bears Paw Mountains south of the project area are the deeply eroded remnants of an isolated cluster of volcanoes active some fifty million years ago. Rock outcrops in surrounding hills are likely associated with volcanic rocks from the Bears Paw Mountains. Within the Beaver Creek drainage, eroded volcanic material is mixed with reworked glacial debris deposited during the last glacial episode some 15,000 years ago. The parent rocks for material found in the drainage includes chert, granite and a variety of metamorphic rocks.

Impacts of the Preferred Action. The proposed reconstruction of Highway 234 would involve minor cutting and filling for highway widening, curve modifications, and constructing approaches to the new bridges. These activities would disrupt, displace, compact, and cover soils not currently associated with the existing highway. Roadside slopes would be graded and revegetated to blend with the adjoining lands. This would help stabilize slopes and to minimize the visual effects of newly disturbed areas.

The construction activities, including clearing and grading, would increase the short-term and long-term potential for soil erosion and sediment transport. This potential for erosion and adverse sedimentation impacts would vary depending upon the amount of soil area disturbed, the nature of the soils disturbed, the steepness of slopes, the proximity of the disturbance to wetlands and surface waters, and the duration of the soil disturbance.

An Erosion Control Plan would be designed for the proposed project and it would be submitted to the MDEQ Permitting and Compliance Division in accordance with their Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314). Best Management Practices, including temporary and long-term erosion control measures, would be considered in the design of these Plans. Such measures may include the use of lined channels, silt fences, ditch blocks, mulch, slope protection and other commonly accepted measures. The Plan would be based on Guidelines from MDT's "Highway Construction Standard Erosion Control Workplan" whose main objective is to minimize erosion of disturbed areas during and after construction.

In accordance with **7-22-2152** and **60-2-208, M.C.A.**, MDT would also reestablish a permanent desirable vegetation community along all areas disturbed by the highway and bridge reconstruction project. The Contractor must follow a set of revegetation guidelines developed by

MDT specifically for this proposed project.

Surface and subsurface materials would be disturbed at locations away from the project area if additional material would be necessary to build the realign the road and to construct new bridge approaches. Typically, MDT's contractor would provide any additional fill material needed for the proposed project.

Cumulative Impacts. The proposed realignment of Highway 234 and reconstruction of three bridges that span Beaver Creek would not cause any notable cumulative effects on the topography, geologic conditions or soils within the project area.

Impacts of the No Action Alternative. This alternative would not disturb any additional surface or subsurface materials along this section of Highway 234.

Mitigating Measures. The following measures would be implemented to minimize project-related effects on the topography and geologic conditions along this section of Highway 234.

- *To stabilize slopes and to minimize the adverse visual effects of rebuilding roadside slopes, disturbed areas would be revegetated as soon as practicable.*
- *An Erosion Control Plan employing Best Management Practices for controlling erosion and sediment transport would be inplemented in the project area. Once disturbed areas are stabilized, MDT would remove temporary erosion control measures like silt fences to enhance aesthetics in the park.*

2. Impacts to Important Farmland

The U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) in Havre was contacted during August 1999 to identify important soils that may be affected by the proposed action. The *FARMLAND POLICY PROTECTION ACT* (FPPA) **(7 U.S.C. 4201 et. seq.)** requires special consideration be given to soils that considered as prime farmland, unique farmland, or farmland of statewide or local importance by the NRCS.

The NRCS identified six soils crossed by Highway 234 as either "Prime Farmland if irrigated" or as "Farmland of Statewide Importance." The designation "Prime Farmland if irrigated" means that if these soils are currently being irrigated then they would be considered Prime Farmland. If they are not irrigated, then the soils do not meet the criteria for Prime Farmland. Since none of the lands within Beaver Creek County Park are irrigated, no soils meeting the Prime Farmland designation would be affected by the proposed project. The following soils (listed by soil number and name) were identified as being Farmland of Statewide Importance. Those soils also meeting the Prime Farmland if irrigated designation are also highlighted with an asterisk (*).

831A	Straw-Korchea loams (0-2% slopes)*	**671B**	Bearpaw-Vida clay loams, (0-4% slopes)*
671C	Bearpaw-Vida clay loams, (4-8% slopes)	**76B**	Bowery loam (0-4% slopes)*
75B	Farnuf loam (0-4% slopes)*	**75C**	Farnuf loam (4-8% slopes)

Impacts of the Preferred Action. Although six soils crossed by Highway 234 meet the NRCS designations of either "Prime Farmland if irrigated" or "Farmland of Statewide Importance," lands within Beaver Creek County Park are not irrigated and are not farmed. Haying does occur on lands in the county park in most years. However, this activity is typically done to limit the risk of wildfire and to generate supplemental revenue for park operations and maintenance.

The principal use of lands in Beaver Creek County Park has been and will continue to be for developed and dispersed recreation and not agriculture. Therefore, this highway reconstruction project would not impact farmland and the provisions of the FPPA do not apply. Since park lands are not used as farmland, MDT did not prepare or process a *Farmland Conversion Impact Rating Form* (Form # AD-1006) for this proposed action.

Cumulative Impacts. The proposed realignment of Highway 234 and replacement of three bridges spanning Beaver Creek would not cause any cumulative effects on farmland within Hill County or surrounding areas.

Impacts of the No Action Alternative. The No Action Alternative would not convert any prime, unique or important farmland in the project area.

Mitigating Measures. No mitigating measures are necessary or proposed.

3. Impacts to Water Resources and Quality

Surface Water Resources. Beaver Creek is a relatively small, perennial tributary of the Milk River. The stream originates in the Bears Paw Mountains located south of the project area. Beaver Creek flows northerly for a distance of approximately 24 km (15± miles) before joining the Milk River 5 km (3± miles) west of Havre. The reach of Beaver Creek within the County Park has a fairly stable channel. The original highway construction affected the stream when a number of wide-ranging meanders were bisected. The stream channel modifications caused by early road construction through the area left some reaches of Beaver Creek with steep gradients and lower than desired amounts of pools and riffles. The most notable tributaries to Beaver Creek within the project area are Sucker Creek, Sawmill Creek, and Rocky Hock Creek. Numerous other intermittent tributaries flow into to Beaver Creek from adjacent coulees.

Two surface water impoundments, Bear Paw Lake and Beaver Creek Reservoir, have been developed along the Beaver Creek drainage in the project area. Bear Paw Lake has a surface area of about 18 hectares (ha) (45± acres) and is controlled by a surface spillway and penstock. Bear Paw Lake is located east of Highway 234 and just south of Rotary Hill. The lake is managed to provide a constant water surface elevation throughout the year and the MDFWP stocks the lake to maintain a recreational fishery. Beaver Creek Reservoir is located near the entrance to Beaver Creek County Park at the north end of the project. The reservoir has a surface area of nearly 49 ha (120± acres) at full pool and is used for downstream irrigation, flood control, and recreation.

Surface Water Quality. Surface water quality is typically assessed according to the amount and kind of substances present in water, by the water's ability to support beneficial uses such as irrigation and recreation, and by the overall health of the aquatic ecosystem. The health of streams and wetlands (and other surface waters) is assessed based on the constituents dissolved in the water, the condition of the banks and associated riparian zone, and the types and numbers of plants and animals living in the water.

The MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY (MDEQ) has established a surface water use classification system that employs four basic categories (A, B, C and I) based primarily on water temperature, fisheries, and associated aquatic life. "A" category waters are very high quality and their principal beneficial use is public water supply. The B and C classifications are subdivided into cold water aquatic life and warm water aquatic life support. MDEQ considers Beaver Creek to be a "B-1" Class water and suitable for drinking, culinary and food processing after conventional treatment; bathing, swimming, and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl, and furbearers; and agricultural and industrial water supply. Water quality parameters associated with "B-1" Class waters are listed below:

Table 2: Specific Water Quality Criteria for "B-1" Class Waters

Criteria	MDEQ Standard
Coliform Bacteria	200/100 ML
Dissolved Oxygen (30 day mean concentration)	6.5 mg/l
Maximum Increase Turbidity	5 Units
Color	5 Units
Sediment	No Increase that will affect a use
Maximum Change Temp	1° F
PH (Maintained between 6.5 and 9.5)	0.5 pH unit

Source: Montana Surface Water Quality Standards, Administrative Rules of Montana, Title 17, Chapter 30, Subchapter 6. (See http://web1.nris.state.mt.us/deq/ppa/305b/305br020.htm)

The MDEQ has the responsibility under *Section 401* of the federal *CLEAN WATER ACT* (**33 U.S.C. 1251 – 1376**) and the *MONTANA WATER QUALITY ACT* (**75-5-101 M.C.A.**, *et seq.*) to monitor and assess the quality of Montana surface waters and to identify impaired or threatened stream segments and lakes. The MDEQ sets limits, known as Total Maximum Daily (TMDLs), for each pollutant entering a body of water. TMDLs are established for streams or lakes that fail to meet certain standards for water quality and describe the amount of each pollutant a waterbody can receive without violating water quality standards. The legislatively mandated TMDL process determines the concentration of pollutants in waterbodies and stipulates controls needed to improve water quality in order to support designated uses.

The MDEQ has identified waterbodies (i.e., streams or lakes) that do not fully meet water quality standards and support the appropriate beneficial uses or are fully supporting their uses as stipulated in the standards but are threatened. Such streams or lakes are referred to as "water quality limited" and are in need of TMDL development. It should be noted that a portion of Beaver Creek (from Beaver Creek Reservoir to the mouth of the Milk River) was designated as "water quality limited" and was on the 1996 303(d) List of *Waterbodies In Need of TMDL Development* 303(d) List. At that time, the agency considered Beaver Creek to be a low priority for the development of TMDLs and listed the stream's cold-water fishery (trout) and aquatic life support as "probable impaired uses."

The MDEQ released its Final Year 2000 303(d) List of *Impaired and Threatened Waterbodies in Need of Water Quality Restoration* in November 2000 and Beaver Creek is not included on the List. The MDEQ anticipates developing TMDLs for the Middle Milk River watershed (which includes Beaver Creek) in 2007.

Beaver Creek Stream Assessments. Clayton Marlow, a member of the faculty in the Animal & Range Sciences Department at Montana State University, visited Beaver Creek County Park in August 2000 and conducted stream assessments at eleven reaches of Beaver Creek for the MDFWP. The assessments were performed according to the Stream Visual Assessment Protocol outlined in the NRCS's National Water and Climate Center, Technical Note 99–1, issued in December 1998. This protocol is intended to be a simple, comprehensive assessment of stream condition and provides an initial approximation of stream condition. It can also be used to identify the need for more accurate assessments focusing on a particular aspect of the aquatic system.

The stream assessments were done to provide the MDFWP (an agency interested in this project and the overall health of Beaver Creek) with information about the stream's existing riparian habitat and streambed condition. Basic to such stream assessments is the belief that streams with high quality riparian habitat, stable channels, and no obvious sources of non-point source pollution will fully support a healthy aquatic community. Both subjective evaluations and sampling were part of the assessment methodology with the following factors considered:

channel condition
riparian zone vegetation
water appearance
barriers to fish movement
pools and riffles
habitat for macroinvertebrates/insects
hydrologic alterations
bank stability
nutrient enrichment
amount of instream cover for fish
macroinvertebrates observed
type of fishery (cold or warm water)

The stream assessments resulted in the assignment of numerical scores for each of the factors identified above and the totals of all individual scores were used to identify the overall condition of each stream reach. Although the results of Marlow's work were not made available to MDT during the development of this document, his preliminary findings indicate that of the eleven reaches examined, one reach of the creek was found to be "functioning acceptably," nine reaches are "functioning at risk," and one reach was identified as being "at risk." According to Marlow, the stream's physical parameters (bank stability, riparian zone vegetation, channel condition, etc.) are generally acceptable. However, preliminary findings suggest the levels of nutrients and suspended sediments in parts of Beaver Creek are water quality concerns. MDFWP's Region 6 Office in Glasgow should be contacted for additional information regarding the results of Mr. Marlow's Stream Assessments.

Groundwater Resources. The occurrence, movement, and quality of groundwater in the project area are closely tied to the surrounding geological conditions. The sandstone layers of the Judith River Formation is the most widely used bedrock aquifer in the county and is a primary source for domestic and stock water. Wells drilled into the Judith River Formation are typically at depths of 30 to 60 m (100 to 200 feet) and the groundwater obtained is variable in quality. The alluvium found along streams and glacial deposits are other principal sources of groundwater for domestic use and stock watering purposes.

Domestic wells in the project area are typically drilled to depths of less than 30 m (100 feet) although records show some area wells exceed 90 m (300 feet). Groundwater information obtained from the Bureau of Mines and Geology show that the Camp Kiwanis well has a total depth of about 17 m (57 feet) and its static water level is 5.5 m (18 feet) below the ground surface. Static water levels in area wells typically occur at depths ranging from 3 to 20 m [10 feet to 65 feet (GWC – http://mbmggwic.mtech.edu/)]. Wells used for stock watering are often shallower than wells for domestic purposes.

Impacts of the Preferred Action on Surface Waters. Erosion and sedimentation during construction and surface runoff after construction would be the principal ways that water quality could be affected by the proposed highway reconstruction project. Unless preventative measures are taken, erosion and sedimentation and highway runoff have the potential to affect water quality and aquatic resources.

As indicated earlier, vegetation clearing and grading for the proposed highway and bridge construction would increase the potential for soil erosion and sediment transport. Additionally, lengthening or replacing culverts and reconstructing adjacent roadway approaches would expose soils and increase the potential for erosion. Although erosion occurs naturally to some extent, the erosion of areas disturbed by the construction could contribute additional sediments to surface waters. Increased sediment loads, particularly for a long duration, may alter downstream deposition patterns, cause water temperatures and turbidity levels of the water to rise, increase the level of nutrients (nitrates and phosphorus), decrease the quality of existing fisheries, and promote the growth of algae.

Because MDT's Erosion Control Plan would be implemented to control erosion and sediment transport during and after the proposed project, the reconstruction of Highway 234 and the three bridges spanning Beaver Creek would not cause notable adverse effects on surface water quality. Because the area of soil disturbance for this project would exceed 2.0 ha (5.0 acres), a NPDES storm water permit administered by the MDEQ would be required. MDT would develop a storm water pollution prevention plan for this project to meet permit requirements.

Temporary degradation of surface waters would occur from this proposed project due to the need to excavate material from within the channel and place minor amounts of fill materials along the banks of Beaver Creek. Limited excavation within the historic streambed would be necessary to construct piers to support the new bridges. Riprap and small amounts of fill would be placed along the banks of Beaver Creek to construct end bents and approaches to the new bridges.

Small amounts of fill below the ordinary high water mark may be needed at stream crossings for the replacement of roadway culverts and for the installation of temporary bridges and detours. Work in Beaver Creek would also be necessary to implement fisheries enhancement activities downstream of the three bridges included in the project and within the stream channel in the area north of Rotary Hill. Work in or near streams in the project areas would require *124SPA* Stream Protection Permits from MDFWP. Likewise, the placement of any fill material in surface waters or wetlands would be subject to the issuance of Section 404 permits by COE. These and other permit requirements are discussed at the end of this Part.

Potential water quality impacts can also occur due to highway runoff during the operational life of the road improvement project. The primary constituents in highway runoff include suspended sediments (pavement wear and dirt), lead (gasoline, tire filler), zinc (tire filler, motor oil stabilizers), copper (metal platings, brake linings), and petroleum (gasoline, antifreeze, hydraulic fluids). Impervious road surfaces produce runoff amounts proportional to the pavement area. Rural roadways with gravel shoulders and ditches tend to slow runoff through absorption into adjacent vegetation and soils.

Highway runoff can also have adverse effects if no measures are taken for the removal of excessive contaminants before the runoff reaches the receiving water. The most common contaminants in highway runoff are heavy metals, inorganic salts, aromatic hydrocarbons, and suspended solids that accumulate on the road surface as a result of regular highway operation and maintenance activities. Salting and sanding practices, for example, may leave concentrations of chloride, sodium, and calcium on the roadway surface. Ordinary operations and the wear and tear of our vehicles also result in the dropping of oil, grease, rust, hydrocarbons, rubber particles, and other solid materials on the highway surface. These materials are often washed off the highway during rain or snowstorm events.

During the mid-1980s, the FHWA conducted extensive nationwide studies to determine highway runoff constituents, amounts relative to roadway types and traffic conditions, and the potential impacts to surface water resources *(Pollutant Loadings and Impacts from Highway Stormwater Runoff, Volume* I, FHWA, April 1990). FHWA's research concluded that pollutants in highway runoff are not present in amounts sufficient to threaten surface or groundwater where Average Daily Traffic (ADT) volumes are below 30,000. Since traffic volumes on Secondary Highway 234 are not expected to exceed 1,500 vehicles per day in the foreseeable future, it can be reasonably concluded that runoff from the highway would not cause significant degradation of surface or groundwater in the project areas.

Water quality could also be impacted by an accidental spill or release of gas, oil, or other chemicals into Beaver Creek. The possibility of accidental spills into Beaver Creek presently exists and such an occurrence would be possible with this proposed project. The likelihood of such an event would be reduced slightly due to the improved roadway geometrics, less severe roadside slopes, and the ability of new and wider bridges to accommodate all legal loads.

Impacts of the Preferred Action on Groundwater. Groundwater hydrology in the project area would be unaffected by the proposed highway improvements since necessary excavation would not expose or affect the groundwater table. The proposed project would have no direct adverse impacts to groundwater or public or private drinking water supplies.

As indicated in Part III, MDT and Hill County intend to develop springs at twelve locations in or immediately adjacent to Beaver Creek County Park. These locations, shown on **FIGURE 5**, are typically the sites of existing springs or seeps and were recommended for development based on field reviews completed by knowledgeable range management professionals and livestock managers. The proposed spring developments would provide water sources for livestock at locations away from Highway 234 and are key elements of the Safety Mitigation Plan required to comply with the recent revisions to state's "open range" fencing law (**60-7-103, M.C.A.**). The proposed spring developments, supplemented by the use of salt and other attractants at locations away from the road, would likely increase traffic safety for highway users since livestock would no longer need to cross Highway 234 to access water.

The proposed spring developments would involve only minor construction at each identified location. Spring developments would likely consist of perforated collector pipes installed in water-bearing zones and connected to a simple spring boxes, supply piping to stock tanks or troughs, and a drain pipe. The springs would rely upon spring flows and gravity to feed the stock tanks at each installation. Limited excavation would be required at each site to create gravel-filled trenches for collection piping and locations for concrete or metal pipe spring boxes. The configuration of the trenched collection system would likely vary depending upon conditions at each spring development site. Supply and drain piping 50 mm (2 inches) or less in diameter would also typically be buried at each spring development. MDT would pay the costs of installing the stock watering facilities but Hill County would be responsible for planning and constructing the water developments.

Development of springs as supplemental water sources for livestock in Beaver Creek County Park would require the completion of *Form 602 R3-00: Notice of Completion of Groundwater Development* and payment of $25.00 filing fee. This form documents groundwater developments with a maximum use of 35 gallons per minute or less, not to exceed 10 acre-feet per year. The amount of groundwater withdrawn each year from the proposed spring developments would produce negligible long-term impacts on groundwater resources.

Cumulative Impacts. The Preferred Action would not cause cumulative impacts on water quality since its impacts would be short-term. This project would rebuild an existing road and three bridges without creating new permanent water disturbances.

The proposed development of springs in Beaver Creek County Park could have long-term, positive effects on the water quality in Beaver Creek. Livestock that drink in streams are a direct source of nutrient and bacterial pollution of water and can cause erosion of stream banks where they access the stream. Providing alternate watering facilities away from the stream should notably reduce livestock-related impacts on surface water quality.

Impacts of the No Action Alternative. The No Action Alternative would not cause any new effects on surface waters in the project area. Due to the passage of Senate Bill 259, MDT and Hill County would still be required to develop and implement a Safety Mitigation Plan in lieu of right-of-way fencing. It is assumed that spring developments, an integral element of the Safety Mitigation Plan, would be planned and built under Hill County's direction and paid for by MDT. As indicated earlier, alternate watering sites should help reduce the adverse effects on some aspects of water quality in Beaver Creek since actions would be implemented to encourage livestock to graze and water away from riparian areas.

Mitigation Measures. The following measures would be implemented to minimize water quality impacts in the Beaver Creek watershed.

- *An Erosion Control Plan employing Best Management Practices for controlling erosion and sediment transport would be implemented in the project area.*
- *Any restrictions on work near streams or in wetlands would be specified as terms of water-related permits obtained from the MDEQ, MDFWP, and the CORPS OF ENGINEERS (COE).*
- *Development of revegetation plans, erosion control plans, and storm water pollution prevention plans would be coordinated with appropriate permitting and resources agencies.*

4. Floodplain Impacts

Executive Order No. 11988 and FHWA's floodplain regulations (23 CFR 650, Subpart A) requires that the effects of the proposed action be evaluated to determine if any of its alternatives encroach on the "base" floodplain. The "base" floodplain is the area covered by water from the 100-year flood. The 100-year flood represents a flood event that has a 1% chance of being equaled or exceeded in any given year. The Executive Order requires that federal agencies, in carrying out their proposed projects, provide leadership and take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains.

Flood Insurance Rate Map (FIRM) #625B describes the Beaver Creek 100-year floodplain by approximate methods. The floodplain study that provided the basis for the approximate delineation of the 100-year floodplain covered the reach of Beaver Creek from its confluence with the Milk River upstream to approximately km post 21.78 (Milepost 13.53) on Highway 234. Hill County regulates activities within this designated floodplain for the FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). A floodplain permit would be required prior to construction of this proposed project.

Impacts of the Preferred Action. This proposed project would construct new bridges across Beaver Creek at 21.6 km (13.4 miles), 26.1 km (16.2 miles) and 28.5 km (17.7 miles) from the beginning of Secondary Route 234 at the south edge of the City of Havre. At least one of the existing highway bridges has been severely damaged during past flood events. Replacing the bridges as proposed would improve channel hydraulics at each bridge location during high water events.

This proposed project requires a transverse encroachment of the delineated floodplain. MDT has completed detailed hydraulic analyses for each proposed Beaver Creek crossing to serve as a basis for work associated with the proposed construction of a new bridge. The new bridges included would be designed in a manner that would not increase water surface elevations over existing conditions for the 100-year flood event. The new abutments for the bridge would be constructed in the same location as the existing abutments and intermediate bridge piers would be located outside the active channel of Beaver Creek at each crossing. The hydraulic geometry at the Beaver Creek road crossings would be improved. The proposed project would comply with **Executive Order No. 11988** by not promoting or encouraging development within the floodplain or increasing flood liability hazards.

Cumulative Impacts. This project would have no cumulative impacts on the floodplain of the Beaver Creek area because of MDT's design considerations for the replacement bridges and road reconstruction.

Impacts of the No Action Alternative. This alternative would have no new effects on the Beaver Creek floodplain. There are no risks of new flooding, no impacts on natural and beneficial floodplain values, and no likelihood of incompatible floodplain development.

Mitigation Measures. The following measures would be implemented to minimize potential floodplain impacts in the Beaver Creek watershed.

- *MDT would obtain a Floodplain Development Permit from Hill County for construction activities within the delineated floodplain of Beaver Creek.*
- *Bridge designs would ensure that water surface elevations do not increase over existing conditions for the 100-year flood event.*

5. Air Quality Impacts

Air quality within the project area can be described as good. No violations of state or federal air quality standards are known. Short-term and localized areas of air quality pollution may occur at times during the year due to dust generated by traffic on unpaved roads in the area, agricultural activities, and from occasional outside burning.

Impacts of the Preferred Action and the No Action Alternative. The proposed road reconstruction and bridge replacement project is located in an unclassifiable/attainment area of Montana for air quality under 40 CFR 81.327, as amended. As such, this project is not covered under U.S. ENVIRONMENTAL PROTECTION AGENCY'S (EPA's) Final Rule of November 24, 1993 on Air Quality conformity. Therefore, the proposed project complies with *Section 176(c)* of the *CLEAN AIR ACT* **(42 U.S.C. 7521(a))**, as amended.

This road reconstruction and bridge replacement project would involve actions whose individual and cumulative effects would be minor and would not affect regional emissions. These conclusions can be reasonably made on the basis of the high existing air quality of the project area and the relatively low volumes of traffic using the roadway. For these reasons, neither the Preferred Action nor the No Action Alternative would be expected to result in adverse air quality impacts.

Road construction activities would cause minor short-term air emissions of particulate matter, volatile organic compounds (VOCs), and odors as a result of ground disturbance, vehicle exhaust, and use of new surfacing materials.

Cumulative Impacts. Reconstructing Secondary Highway 234 and replacing three bridges would have no cumulative impacts on the Beaver Creek County Park airshed. The existing air quality of this region of Montana is high and the proposed improvements would not cause traffic increases or new development that would cause adverse effects to this condition.

Mitigation Measures. The following measure would be implemented to minimize any air quality impacts associated with the construction of MDT's proposed project.

- *MDT would incorporate all necessary dust control measures into the plans for the proposed project.*

6. Impacts to Vegetation

General. The native plant communities along Highway 234 within Beaver Creek County Park form a mosaic of wetland and upland habitats. Dominant vegetation in woodland/shrub communities along Beaver Creek north of Bear Paw Lake consist of include serviceberry, snowberry, hawthorn, woods rose, Timothy, slender wheatgrass, Kentucky bluegrass, beaked sedge, quaking aspen, black cottonwoods, birch, and booth and sandbar willows. Upland areas north of Bear Paw Lake support needle and thread grass, rough fescue, western wheatgrass, fringed sagewort, snowberry, skunkbush sumac, and silver sagebrush.

South of Bear Paw Lake, the highway corridor is typically situated further from Beaver Creek and vegetation adjacent to the road generally consists of species associated with plains landscapes. Vegetation communities are sparser and species like bluebunch wheatgrass, sandberg bluegrass, Columbia needlegrass, western yarrow, and snowberry. Riparian communities in this part of the park are dominated by beaked and Nebraska sedge, tufted hairgrass, brome, Timothy, western yarrow, serviceberry, willows, birch, alder, and redosier dogwood.

Rangeland Condition Assessment. Natural Resource Options, Inc. (NRO) inventoried range conditions on lands in Beaver Creek County Park during September and October 2000. NRO established eleven range sites within the park representative of the different moisture regimes, soil types, and vegetation communities found in the park. The Ecological Site Inventory method was used to conduct the inventory and local technical and ecological range site condition guides from the NRCS were key sources of data. Range conditions and trends were determined on some 3,339 ha (8,250 acres) of land within the park.

For each range site, soil and vegetative composition data was evaluated. Range condition was calculated based on potential natural vegetation at each site. **TABLE 3** summarizes range site conditions within the area inventoried by NRO. The inventory data showed the present range conditions to be generally good in Beaver Creek County Park. Overall, the rangeland in the Park is producing at approximately 60% of its potential. Flatter, more accessible areas in the park receiving heavier grazing pressure and are producing at about 45-50% of their potential.

Table 3: Summary of Existing Range Site/Habitat Type Conditions In Beaver Creek County Park

Range Site/Habitat Type (Precipitation zone)	Area of Range Site/Habitat in Inventory Area Hectares (acres)	Range Site Condition Rating	Rangeland Production as a % of its Potential
Silty (10"-14")	435.6 (1,076.3)	Fair	45%
Thin silty/shallow complex (10"-14")	475.8 (1,175.8)	Good	58%
Silty (15"-19")	738.8 (1,825.5)	Fair	40-50%
Woodland/Shrub (15"-19")	297.9 (736.0)	N/A	N/A
Shallow (15"-19")	539.5 (1,333.0)	Good-Excellent	70-85%
Riparian/Woodland (15"-19")	174.0 (429.9)	N/A	N/A
Thin Silty (15"-19")	267.5 (661.1)	Good	70%
Woodland/Timber (15"-19")	60.0 (148.4)	N/A	N/A
Subirrigated/Riparian (15"-19")	100.4 (248.2)	Good	65%
Very Shallow (10"-14")	76.0 (187.9)	Excellent	85%
Subirrigated/Riparian (10"-14")	171.4 (423.6)	Good	55%

Source: Beaver Creek County Park Fencing Proposal Project and Grazing Management Overview, Natural Resource Options, Inc., November 16, 2000.

Threatened, Endangered, and Sensitive Plants. The U.S. FISH AND WILDLIFE SERVICE (USFWS) lists water howellia and Ute ladies'-tress orchid as threatened plant species in Montana under the *Endangered Species Act* (ESA) (**16 U.S.C. 1531-1543**). Due to a lack of suitable habitats, neither species occurs in the project area.

The *Montana Natural Heritage Program (MNHP)* was contacted during August 1999 for information on the occurrence of rare or sensitive plants in the project area. According to the MNHP, the desert groundsel, occurs several miles south of the project area in the Bears Paw

Mountains. Desert groundsel is a short-lived perennial that grows on high elevation stream banks and riparian forests. Its preferred habitat begins at elevations of 1160 m (3,800 feet) and there are only three known occurrences of the species in Montana. Desert groundsel is neither known nor suspected to exist within the project area since the elevation of Highway 234 in Beaver Creek County Park is at least 122 m (400 feet) less than the elevations at which known occurrences of the plant were recorded.

Invasive/Noxious Plants. Both the federal and state governments have regulations concerning noxious weeds. **Executive Order No. 13112**, signed in February 1999, requires federal agencies (e.g., FHWA) whose actions may affect the status of invasive species to prevent the introduction of invasive species, detect and control populations of such species, monitor invasive species populations, and restore native species and habitats that have been invaded to the extent practical and permitted by law. At the state level, Montana assigns responsibility for noxious weed control to each county.

Several invasive plant species commonly grow along Highway 234 and other roads within Beaver Creek County Park. Species known to occur include yellow and white sweetclovers, common dandelion, field pennycress, foxtail barley, smooth brome, cheatgrass, clasping pepperweed, showy milkweed, and prickly lettuce. Three other species (creeping thistle, field bindweed, and sulfur cinquefoil) that have been classified as Category I noxious weeds by the State of Montana occur in the park.

Impacts of the Preferred Action. Temporary disturbances would occur where vegetation is cleared from the right-of-way, at staging areas for construction equipment and at any necessary borrow sites. Virtually all of the proposed construction would occur in areas immediately adjacent to the existing road currently subjected to other sources of human disturbance, including residential, recreational, and agricultural (farming, grazing) activities. Consequently, the effects of the proposed project on vegetation communities, including wetland and riparian vegetation, would be minor. None of the affected vegetation provides high quality habitats for wildlife or waterfowl.

The proposed road reconstruction and bridge replacement project would not affect any federally-listed threatened or endangered plant species or any rare and sensitive plant species.

Many noxious weed species gain a foothold after ground disturbances; therefore the potential for the spread of noxious weeds (like spotted knapweed and Canada thistle already in the project area) is a concern due to the disturbance associated with the proposed project. Once noxious weeds become established, they are often extremely difficult and very expensive to eradicate or control. Noxious weed movement from highway corridors onto adjacent land can reduce the value of an area for rangeland, wildlife habitat, or other uses.

Implementation of weed control measures prior to and during construction would reduce the potential severity of this impact. Measures to control weeds include: spraying weeds prior to initial disturbance; use of weed-free soils and other materials, including certified weed-free seed for reclamation; and maintaining weed control along the project for an adequate period of time following construction.

In accordance with **Executive Order No. 13112** *Invasive Species*, MDT would implement measures to help prevent the introduction of invasive species into the Beaver Creek project area. These measures would include coordinating the projects with the Hill County Weed Control District, promptly reseeding disturbed areas with desirable vegetation, and requiring MDT's contractors to follow procedures to prevent the spread of noxious weeds.

The implementation of spring developments would likely result in a limited amount of vegetation being trampled by livestock during movements to and from stock tanks and adjoining grazing lands. Livestock would "pioneer" new trails to watering sites across park lands. The provision of off-stream water supplies supplemented by salt licks should result in beneficial effects on riparian vegetation as livestock would be encouraged to congregate away from stream banks.

Cumulative Impacts. Ground disturbing activities from the proposed road reconstruction and bridge replacement project and other present and future development in the project area could result in the loss of minor amounts of native vegetation and offer the potential for the spread of noxious weeds.

Impacts of the No Action Alternative. This alternative would cause no further impacts on vegetation within the Beaver Creek area. The development of springs as part of the required Safety Mitigation Plan would result in the loss of minor amounts of vegetation due to trampling near stock tanks and the formation of new paths between grazing areas and watering sites.

Mitigation Measures. The following measures would be implemented to minimize vegetation impacts and reduce the potential for the spread of noxious weeds in the Beaver Creek project area.

- *All grubbing and clearing operations would be strictly confined to MDT's defined construction limits.*
- *Disturbed areas would be reseeded as quickly as possible after construction.*
- *A revegetation plan would be developed for this project to be followed by the contractor. The plan would include specifications on seeding methods, seeding dates, types and amounts of mulch and fertilizer, and seed mix components. The plan would also be submitted to the Hill County Weed Control District for review.*
- *The Contractor must also follow the requirements of the County Noxious Weed Management Act and all county and contract noxious weed control provisions. The Contractor must contact the Hill County Weed Supervisor (Terry Turner* at *406-265-5841 ext. 264) to develop a Noxious Weed Management Plan prior to moving any earthmoving equipment into the project area.*
- *Mulch used for revegetation would be certified as weed-free.*
- *Inspect borrow sites prior to use so that sites with chronic weed problems can be excluded from use during construction.*

7. Impacts to Wetlands

Wetlands in the project area were delineated during June 1999 by a biological resources consultant. Project area wetlands were delineated according to criteria and methods outlined in the COE 1987 Wetlands Delineation Manual. The manual determines the presence of jurisdictional wetlands based on observations of vegetation, soils, and hydrology. A study corridor 61 m (200 feet) wide centered on the existing roadway was evaluated for the presence of jurisdictional wetlands. Wetland location maps, found plant species lists, and COE Routine Wetland Determination forms were completed for wetland sites identified within the corridor.

Additionally, MDT Field Evaluation forms were completed to assess the many functions and values attributable to wetlands. These materials may be found in the Wetlands Finding section and Appendices of the Biological Resources Report prepared for MDT by a consultant in December 1999.

Wetlands within the project area are generally associated with Beaver Creek and its floodplain and minor drainages of Beaver Creek. Five general types of wetlands were identified including: 1) scrub-shrub wetlands in depressions within the riparian floodplain; 2) wetlands perennially inundated with the assistance of beaver; 3) emergent wetlands along the fringes of Beaver Creek; 4) "wet-meadow" wetlands sustained by seasonally high groundwater; and 5) linear wetlands in minor drainages of Beaver Creek.

A total of 3.18 ha (7.84± acres) of wetlands were delineated at the twenty-six wetland sites within the Highway 234 study corridor. The majority of these wetlands are rated Category II or III according to MDT's Wetland Assessment Method. This means that most wetlands in the project area possess moderate to high overall function and value ratings due to their overall size, vegetative diversity, and wildlife habitat characteristics.

Impacts of the Preferred Action. Project-related impacts to identified wetlands would result from the minor widening and alignment shifts proposed for Highway 234 and from construction of end bents and piers within Beaver Creek and its riparian zone. Together, these project activities would impact about 0.348 ha (0.865 acres) of delineated wetlands. The proposed temporary bridges and detours at the sites of three bridge replacements also has the potential to contribute beyond the identified wetland impact if disturbed areas are not reclaimed to former conditions.

Indirect impacts to wetlands, both long- and short-term, could also result since virtually all wetland sites have some hydrological connections to Beaver Creek. These indirect impacts can largely be avoided since disturbed areas would be promptly reclaimed areas and MDT's contractor would be required to adhere to best management practices for erosion control.

Cumulative Impacts. No cumulative impacts to wetlands are foreseen as a result of the proposed road reconstruction and bridge replacement project and other present and future development activities in the project area.

Impacts of the No Action Alternative. This alternative would cause no further impacts to wetlands within the project area.

Mitigating Measures. A mitigation strategy to offset the projected loss of wetlands is under development. Practical opportunities exist to mitigate wetland impacts during the planned restoration of Beaver Creek being jointly developed by MDT and MDFWP.

Additionally, the following measures would be implemented to minimize impacts to wetlands in the project corridor.

- *The design for the proposed road reconstruction and bridge replacements and their approaches has been developed to minimize encroachment into wetlands.*
- *If impacts to wetlands cannot be avoided, MDT would seek opportunities to provide replacement wetlands in the area of this proposed project.*
- *An Erosion Control Plan employing Best Management Practices for controlling erosion and sediment transport would be implemented in the project area.*
- *Any restrictions on work near streams or in wetlands would be specified as terms of water-related permits obtained from the MDEQ, MDFWP, and the COE. Development of revegetation plans, erosion control plans, and storm water pollution prevention plans would be coordinated with appropriate permitting and resources agencies.*

8. Impacts to Threatened and Endangered Wildlife

In accordance with *Section 7(a)* of the ESA (**16 U.S.C. 1531-1543**), MDT contacted the USFWS for a list of endangered, threatened, proposed, and candidate species that could occur in the project area. The USFWS currently lists sixteen species in Montana (including the two plants mentioned earlier) that are considered as either threatened or endangered. MDT consulting biologists also assessed whether or not any of the federally-listed threatened or endangered species or important habitat for the species occur in the project area. MDT concluded the following species could occur in the Highway 234 project area in Beaver Creek County Park. The species and other pertinent information about habitats and is presented in **TABLE 4**.

MDT determined that the threatened bald eagle and the proposed (for listing as threatened) mountain plover, are known to occur or suspected as possibly occurring in this portion of Hill County. The Yellowstone cutthroat trout, a species that has been petitioned for listing and that is currently under review by the USFWS, occurs in Beaver Creek primarily above Bear Paw Lake.

MDT's Biological Resources Report identified the swift fox as potentially occurring in the project area. At the time MDT's Biological Resources Report was prepared, the swift fox was considered to be a "candidate species" for listing by the USFWS in Montana. Based on new biological information obtained on the species, the USFWS concluded on January 8, 2001 that the swift fox did not warrant listing as a threatened species under the *ENDANGERED SPECIES ACT*.

The decision by the USFWS removed the swift fox from consideration for listing based on its current status.

The recently de-listed peregrine falcon, could also occur in the project area. The peregrine falcon was de-listed by the USFWS in August 1999 because the species has been successfully reestablished throughout the country. There are no known occurrences of peregrines or no known nesting habitat in the project area.

Table 4: Species, Habitat, and Potential Occurrence of Threatened or Endangered Wildlife in Beaver Creek County Park

Species Federal Status	Important Habitat in General Project Area	Potential Occurrence
Bald Eagle *(Haliaeetus leucocephalus)* Threatened*	Mature cottonwoods, riparian and wetland areas	Infrequent migratory inhabitants of the northern foothills of the Bears Paw Mountains. No known nests or nesting territories in project area and notable lack of perching sites in lower (northern) reaches of park.
Mountain Plover *(Charadrius montanus)* Proposed Threatened	Barren dry grass prairies, plains with sagebrush, and flat topography	No known occurrence. Possible rare migrant within the project area. Could potentially be found in grassland/shrubland habitat adjacent to Highway 234 within Beaver Creek County Park.
Yellowstone Cutthroat Trout *(Oncorhynchus clarki bouvieri)* Petitioned for listing	Beaver Creek and its headwater tributaries	"Rare" year round resident occurring in Beaver Creek above Bear Paw Lake.

* On July 6, 1999, the bald eagle was proposed for removal from the Federal List of Endangered and Threatened Wildlife. The bald eagle remains protected as a threatened species until delisting is final.

Bald eagles are believed to be infrequent migratory inhabitants of the northern foothills of the Bears Paw Mountains. Although Beaver Creek possesses extensive wetlands and riparian areas suited for a variety of raptors, bald eagles are less well accommodated by this habitat since they tend to seek fish and waterfowl as the mainstay of their diets. There are no known nesting territories for bald eagles in or near the project area. The nearest known nests occur on the Missouri River south of the Rocky Boy's Indian Reservation. Suitable perching sites for bald eagles such as mature cottonwood trees and old snags are also notably absent from the project area, particularly in the lower (northern) reaches of Beaver Creek.

Suitable habitat for mountain plover likely occurs in the drier foothills of the general project area but little such habitat exists in the immediate area of this proposed action. The species prefers barren dry grass prairies and plains with sagebrush. Consequently, mountain plovers would not likely be found within the floodplain zone of Beaver Creek but could potentially be found on arid flats within the Beaver Creek County Park. At best, mountain plovers may occur infrequently within the project area.

Impacts of the Preferred Action. As indicated above, the only threatened, endangered, proposed, or candidate species that may occur in the Beaver Creek project area are the bald eagle, mountain plover, and the petitioned for listing Yellowstone cutthroat trout.

Impacts to threatened and endangered species can be categorized as direct or indirect effects and such effects may be short-term or long-term. Direct effects are results of the proposed action. Direct effects may include loss of habitat and mortality of individuals. Indirect effects are effects caused by the proposed action that are reasonably certain to occur. Primary indirect effects include potential disturbance and displacement of individuals, decrease in reproductive success, and habitat degradation. For many species, the magnitude of effects would depend on the timing and duration of construction activities.

The potential impacts associated with reconstructing Secondary Highway 234 and replacing three bridges on identified threatened and endangered species are described below.

- **Potential Impacts to Bald Eagles.** No bald eagle nest sites occur in the immediate project area, and no potential nest, perch, or roost habitat would be affected by the road reconstruction or bridge replacements.

  The *Habitat Management Guide for Bald Eagles in Northwestern Montana* (Montana Bald Eagle Working Group, 1991) defines three primary zones associated with bald eagle nests. The *nest site area* includes the area within 400 m (0.25 mile) of the existing and alternate nests. Eagles are most sensitive to human activity within this zone, and will react to intrusion. The *primary use area* includes the area heavily used by a nesting pair, or an 800 m (0.5 mile) radius from the occupied and alternate nests. The *home range* represents all areas used by the eagles during the nesting season. In the absence of site-specific data, the area within a 4 km (2.5 mile) radius should be considered as a minimum home range for nesting eagles.

  Construction activities during all seasons could conceivably temporarily disturb or displace eagles. However, these impacts are not considered substantial because the disturbance would occur for only a limited time period and the area affected by the project is relatively confined and already highly disturbed. Similar and more attractive habitat for any displaced birds is abundant in the surrounding area. The immediate project area receives abundant human use during the nesting season for bald eagles. Due to substantial pedestrian and recreation use, the project area is unlikely to be a preferred foraging habitat for eagles.

  Bridge and pier construction and removal, along with soil exposure associated with project activities, would result in temporary increases in turbidity in the Beaver Creek downstream of the project. Water quality would be indirectly affected over the short-term by the influx of pollutants from unpaved surfaces during storm events. Increases in turbidity and suspended sediment could result in reductions of stream productivity and reduction of feeding opportunities for sight-feeding species, including bald eagles. These temporary impacts should be reduced by implementing standard best management practices for pollutant/sediment/erosion control during construction and through compliance with project-specific conditions associated with the *124SPA* Stream Protection Permit and COE *Section 404 Clean Water Act* permit required for the project.

- **Potential Impacts to Mountain Plover.** Although mountain plovers could infrequently occur within Beaver Creek County Park, the species would likely be encountered only on arid flats and not within the floodplain or riparian zone of Beaver Creek. Impacts to mountain plover would not be expected since the proposed work involves minimal widening and resurfacing along the existing alignment. The proposed spring developments would not be expected to impact mountain plovers since these developments would occur in upland drainages and riparian zones.

- **Potential Impacts to Yellowstone Cutthroat Trout.** Yellowstone cutthroat trout occur in Beaver Creek primarily above Bear Paw Lake. The proposed highway reconstruction would not harm Yellowstone cutthroat trout or any aspect of the aquatic environment. Potential effects on Yellowstone cutthroat trout (and other fish species) would include minor, temporary impacts on the aquatic environment in the vicinity of the highway bridge replacements located 26.1 km (16.2 miles) and 28.5 km (17.7 miles) south of Havre, respectively. These bridge replacements have the potential for causing short-term increases in turbidity since work would occur within the stream and its banks at these locations.

  The terms and conditions of water-related permits and the incorporation of best management practices to control erosion and sedimentation would ensure that project-related effects on Yellowstone cutthroat trout are minimal.

Cumulative Effects to Threatened and Endangered Species. No substantial cumulative effects to bald eagle use of the project or surrounding areas are expected to result from implementing the proposed project, if spatial and temporal construction restrictions are applied on future projects when warranted. Substantial cumulative effects to water quality in the Beaver Creek drainage are not expected if best management practices applied and water quality permit conditions are strictly enforced on this and future projects.

Cumulative/indirect impacts associated with the proposed action may result from increased human development in the general project area which could remove or degrade habitat and increase the risk of mortality to threatened and endangered species from illegal shooting, poisoning or other potentially lethal activities.

Determinations of Effect. The conclusions of the Biological Resources Report are that the implementation of the proposed project would have "**no effect**" on the threatened bald eagle and would "**not likely jeopardize the continued existence**" of the proposed for listing mountain plover. No formal determination of effect is required for the Yellowstone cutthroat trout due to its present status as a petitioned for listing species.

Impacts of the No Build Alternative. The No Build Alternative would result in no new impacts to the threatened bald eagle or the proposed for listing mountain plover.

Mitigation Measures. Given the seasonal presence of bald eagles and their expanding range in Montana, the implementation of the mitigation measures below would ensure that any adverse impacts to bald eagles are minimized or avoided:

- *Any overhead powerlines to be relocated should be raptor-proofed in accordance with "Suggested Practices for Raptor Protection on Power Lines" (Olendorff et al. 1981).*
- *MDT's district biologist should be informed of any recurring eagle activity during construction within 0.8 km (0.5 miles) of the project.*
- *The removal of any mature cottonwoods should be minimized during clearing activities.*

The following coordination measure would ensure that impacts to mountain plovers are avoided or minimized:

- *The locations for borrow/gravel sources or batch plants should avoid impacting "native" short-grass prairie habitats.*

9. Impacts to Other Wildlife Resources and Fisheries

General Wildlife Resources. According to MDT's Biological Resources Report, the wide variety of habitats occurring in the Beaver Creek area support an abundant and diverse population of wildlife species. Habitats within the project area transition from agricultural lands near the north end of the project area to the lush riparian corridor of Beaver Creek and finally to uplands in the foothills of the Bears Paw Mountains. Most notable species are the many songbirds that are seasonally present in the riparian habitats of the project area. References suggest over 198 different types of birds may be present during the breeding season. Other birds found in Beaver Creek County Park include ring-necked pheasant, gray partridge, ruffed grouse and various waterfowl and shore birds, hawks, falcons, and owls.

Amphibians and reptiles expected to frequent the general project area are tiger salamander, western chorus and northern leopard frogs, painted turtle, blue racer, gopher snake, western rattlesnake, garter snakes, and possibly the short-horned lizard.

Larger wild ungulates using the Beaver Creek area are both white-tailed and mule deer, antelope, and infrequently elk. Furbearers abound in the park including beaver, raccoon, mink, striped skunk, muskrats, and weasels. Several carnivores may occur occasionally in the area including black bear, mountain lion, bobcat, red fox and coyote.

Fisheries. Beaver Creek is considered a valuable recreational fishery for trout by the MDFWP.

The agency divides Beaver Creek into three general reaches for fisheries management purposes. Two of these reaches are adjacent to the proposed project including the segments from Beaver Creek Reservoir to Bear Paw Lake and Beaver Creek and its associated tributaries above Bear Paw Lake. The lower section is managed for rainbow and brown trout and the upper waters are managed for brook trout and Yellowstone cutthroat trout. These game species range from "rare" to "common" throughout the reaches of Beaver Creek, Non-game species include longnose dace, mottled sculpin, lake chub, and longnose and mountain suckers.

Impacts of the Preferred Action on Wildlife. In general, the impacts on wildlife associated with the reconstruction of Highway 234 would include: the temporary loss of and avoidance of habitats adjacent to the construction area; direct mortality from vehicles and construction equipment; and permanent habitat degradation and/or displacement. However, the minor curve realignments, minimal road widening, and slope flattening associated with the proposed highway improvements poses little threat to most wildlife species in the project area. The proposed road widening of about 1.2 m (4 feet) would permanently eliminate a minor amounts of habitat adjacent to the roadside. Additionally, wildlife species that rely upon these roadside areas for habitat would be temporarily displaced during construction due to noise and human activities.

The proposed project would affect the grasslands and shrublands adjacent to the road used by some birds for nesting and by some small mammals and reptiles. Some trees would be lost in the cottonwood riparian habitats and a small number of nesting sites or potential nesting sites for birds would be lost. This type of localized loss is common with road reconstruction, and such losses are usually offset by recruitment from adjacent populations over time. Such losses would reduce the available prey for raptors and other carnivores by a negligible amount. Other species of wildlife that may occasionally use the project area (e.g., big game and fur-bearers) would likely avoid the project area during construction due to the noise and human presence.

Construction activities could also result in mortalities of some less mobile wildlife species if individuals are unable to escape construction equipment.

Once construction is finished, the improved road could result in fewer collisions with wildlife (particularly deer) because motorists would have improved stopping sight distance and slightly greater clear zone. However, the improved highway may result in slight increases in travel speed, and thus increase the potential for vehicle collisions with big game, small mammals, and birds. Some level of vehicle/wildlife mortality is largely unavoidable with road use and vehicle collisions would not cause notable decreases in local wildlife populations.

Impacts of the Preferred Action on Aquatic Resources. Three existing bridges over Beaver Creek would be replaced on or near their present locations and new piers for the proposed bridges would be constructed outside Beaver Creek's active channel. Existing drainage culverts throughout the project corridor would be replaced and/or lengthened with pipes matching present pipe diameters. These actions are not expected to cause direct harm to any fish or other aquatic life.

The impacts of the Preferred Action on the Beaver Creek fishery would likely be minor and localized. The most likely period for affecting the fishery would be when stream banks are disturbed to build new abutments and piers. These activities could cause temporary, adverse effects to water quality by increasing turbidity. Sediments from the stream bank could be washed into Beaver Creek by precipitation events and the channel bottom would be disturbed to create footings for the new bridge piers. The potential for temporary increases in turbidity and other water quality impacts from construction activities would be reduced by implementing measures to control the transport of sediments and other pollutants during construction.

With MDT's requirement for the contractor to apply best management practices for erosion control, properly handle fuels and other and contaminants, and reclaim bridge detours, no substantial direct or indirect impacts on the aquatic environment are anticipated. Adherence with the conditions associated with water-related environmental permits would also ensure adverse effects on aquatic resources are minimized.

The proposed highway project includes stream rehabilitation measures at the three bridges that would be replaced. The existing structures are undersized and include piers in the stream, conditions that constrict higher flows and cause aggradation upstream of the bridges. MDT (in cooperation with the MDFWP) has identified an opportunity to improve fish habitat in Beaver Creek downstream of one of the bridges proposed for replacement with this project. MDT would construct a 5 m (16.4 feet) long by 1 m (3.3 feet) wide by 1 m (3.3 feet) deep hole undercutting a heavily vegetated bank about 50 m (164 feet) downstream of the bridge located 21.6 km (13.4 miles) south of Havre (at Project Station 72+86.00). MDT will construct a rock vortex weir and scour hole within the Beaver Creek channel as part of another bridge replacement project on Highway 234 about 17.1 km (10.6± miles) south of Havre. This stream rehabilitation work addresses some of the concerns over Beaver Creek's low pool-to-riffle ratio identified in the "Beaver Creek Stream Assessment/Feasibility Study" (Joseph Urbani & Associates, June 1999).

MDT also intends to undertake stream enhancements on a short section of Beaver Creek north of Rotary Hill where the stream crosses under the highway in a large culvert. Currently, the stream flows through a steeply sloped 3.2 m (10.0 feet) diameter steel pipe and cascades into a plunge pool on the west side of the highway. This condition has contributed to sloughing on the bank adjacent to the culvert and fill material placed to counteract bank erosion contributes substantial amounts of sediment to the stream.

To eliminate the abrupt grade change in Beaver Creek and the plunge pool, MDT proposes to lengthen the existing culvert and modify the inlets and outlets of the pipe. The inlet for the culvert would be lowered and a rock weir would be placed in Beaver Creek about 104 m (340 feet) upstream from the culvert. The outlet of the culvert would be extended by 2.5 m (8.2 feet) and a scour hole would be constructed near the outlet. Temporary fencing to exclude livestock grazing may be necessary to ensure the success of stream relocation efforts.

These stream rehabilitation measures are currently under development by MDT hydraulics staff.

Impacts of the Preferred Action on Rare and Sensitive Wildlife and Fish. The highway improvements would be unlikely to impact any rare and sensitive wildlife species. The only rare and sensitive wildlife species known to occur in the general area include the Forsters tern, the dwarf shrew, and the American burying beetle. Since little, if any, suitable habitat for these species exists along Highway 234 in Beaver Creek County Park, no effects to these species would be likely to result from the proposed highway project.

The Yellowstone cutthroat trout, a species that has been petitioned for listing as threatened or endangered under the ESA, occurs in limited numbers in the upper reaches of Beaver Creek (above Bear Paw Lake). Potential effects on Yellowstone cutthroat trout (and other fish species) would include minor, temporary impacts on the aquatic environment in the vicinity of the highway bridge replacements located 26.1 km (16.2 miles) and 28.5 km (17.7 miles) south of Havre, respectively. These bridge replacements have the potential for causing short-term increases in turbidity since work would occur within the stream and its banks at these locations.

Cumulative Impacts. No adverse cumulative effects to wildlife or fisheries are anticipated as a result of the proposed road reconstruction and bridge replacement project and other present and future development activities in the project area.

Impacts of the No Action Alternative. This alternative would cause no further impacts to wildlife, fisheries, or aquatic resources in the Beaver Creek project area.

Mitigation Measures. In addition to conservation measures for threatened or endangered species described earlier, MDT would implement the following measures to ensure that adverse impacts to wildlife and aquatic species are minimized or avoided.

- *MDT has already coordinated proposed work in the stream channel with the MDFWP. Continued coordination would occur to establish desirable times and any other special requirements for construction activities within the channel that might cause harm to aquatic species or their aquatic habitats.*

- *Best management practices for erosion control would be applied in the project area to minimize sediment transport to Beaver Creek.*

- *Disturbed areas would be reseeded as quickly as possible after construction.*

C. Impacts to the Human and Cultural Environment

1. Land Ownership and Use Impacts

Land Ownership. The land within the project area is owned entirely by Hill County and is within Beaver Creek County Park. Through a June 25, 1947 Act of Congress (**P.L. 106**- 80th Congress), lands owned by the BUREAU OF LAND MANAGEMENT (BLM) were designated to be purchased by Hill County for the purposes of developing Beaver Creek County Park. About 3,745 ha (9,253± acres) of federal lands for the county park were acquired by Hill County in May 1950 followed by another 372 ha (920±) acres in July 1952.

Hill County granted an easement for approximately 74.9 ha (185.0± acres) to the MDFWP in 1986 for developing a Fishing Access Site at Bear Paw Lake. Hill County also leases a number of seasonal cabin sites in the park.

FIGURE 2 in Part I shows the general ownership of lands in the project area.

Applicable Land Use Plans. The use of lands in the general project area is generally guided by plans and subdivision regulations enacted by Hill County. Beaver Creek County Park is administered by Hill County through the oversight of the membership of the Hill County Park Board. The Park Board is responsible for the maintenance and operation of the park and its facilities and establishing annual fees for public use of the park. Hill County employs a full-time resident manager to oversee park operations.

Existing Land Uses. Scattered rural residences exist along Highway 234 south of Havre and the density of homes decreases with the distance away from town. With the exception of the Park Manager's residence and Park Office at Camp Kiwanis, there are no permanent residences within Beaver Creek County Park. Rural residences and seasonal cabins can be accessed via local roads from Highway 234.

With the exception of various developed recreation sites within Beaver Creek County Park, lands within the project area are rural and undeveloped. A solid waste container site used by residents in this part of Hill County is located west of Highway 234 at the site of the old Civilian Conservation Corps (CCC) camp.

As discussed earlier, livestock grazing may occur annually within Beaver Creek County Park from early September until Christmas. In some years, hay is also cut and sold off land within the park. These agricultural activities generate the majority of the revenue necessary to operate and maintain the park and its related facilities. Approximately twenty ranchers graze cattle in the park and as many as 2,500 cattle may be present at any one time. The park sees the greatest number of cattle during September and October. Most cattle are out of the park by the end of November. The Hill County Park Board adopted a set of grazing policies and procedures in September 1999 to guide this seasonal use of park land. (Included in **APPENDIX D**).

Impacts of the Preferred Action. The proposed reconstruction of Secondary Highway 234 and the replacement of three bridges would impact minor amounts of land adjacent to the existing traffic facility. This impact would be unavoidable due to the need to adjust the current road's alignment and width and to reconstruct roadside slopes.

Virtually all of the affected land is currently used for dispersed recreation and seasonal haying and grazing. MDT's proposed action would cause temporary impacts to these land uses immediately adjacent to the roadway but would not result in any long-term change in the use of park land. The Preferred Action would not impact existing recreation sites, buildings, or seasonal cabins within Beaver Creek County Park. Seasonal grazing and haying would continue within the park.

The proposed spring developments would be located in relatively remote areas of the county park. These proposed water developments would result in notable changes in seasonal livestock management practices and but would not change the overall use of park lands.

Cumulative Impacts. The planned highway improvements and bridge replacements would not encourage new or undesirable growth and development and would not substantially change property values in the Beaver Creek County Park area. This conclusion was reached because MDT proposes to replace three existing bridges and to improve an existing road on its present alignment. The proposed road and bridge improvements on Highway 234 would not cause more people or businesses to move to Hill County or surrounding counties or to the Rocky Boys Indian Reservation. The road and bridges are not being built to induce growth. If growth were to occur in these areas, it would be due to reasons other than the improvement of Highway 234.

Impacts of the No Action Alternative. Other than the probable installation of new water developments for livestock, this alternative would cause no changes to existing land uses in the project area.

Mitigation Measures. None proposed.

2. Right-of-Way and Utility Impacts

This proposed project lies entirely within Beaver Creek County Park on land owned and administered by Hill County. Staff from MDT's Right-of-Way Bureau researched the existing right-of-way status for Highway 234 and determined that an easement for the road has never been recorded over most of the project's length. Research shows that an existing easement for the road ends 2.1 km (1.31 miles) south the beginning of the proposed project (the northern entrance to Beaver Creek County Park). Therefore, a dedicated easement for Highway 234 does not exist through most of the park.

Overhead power and buried telephone lines are within the existing right-of-way corridor and cross Highway 234 at various locations.

Impacts of the Preferred Action. Based on preliminary right-of-way plans, the reconstructed road and bridges on Highway 234 would occupy a total gross right-of-way area of about 62.14 ha (153.54 acres) of land within Beaver Creek County Park. This total includes an area of some 24.92 ha (61.57 acres) devoted to the existing highway and its associated features and about 37.22 ha (91.97 acres) beyond the present road corridor. Note that these right-of-way areas are based on preliminary designs and could change slightly as the highway design is refined. During the process of final design, specific right-of-way needs would be identified and coordinated with Hill County and other interests.

MDT has asked that Hill County dedicate right-of-way through Beaver Creek County Park for the 62.14 ha (153.54 acres) needed to accommodate the reconstructed road and bridges on Highway 234. Dedication of right-of-way for Highway 234 would formally establish a transportation corridor through Beaver Creek County Park. MDT's proposed project would permanently occupy additional County-owned land on each of the existing highway due to the need for minor alignment revisions and to provide safer (slightly flatter) roadside slopes. After the completion of the proposed project and the restoration of surface disturbances, the appearance and use of lands adjacent to the road would be essentially unchanged from present conditions.

In December 2001, Hill County agreed to dedicate the required right-of-way for the proposed improvements to Highway 234. MDT would be responsible for all maintenance activities within the dedicated highway right-of-way.

The owners of conflicting utilities would be required to relocate their facilities prior to the proposed road construction and bridge replacements on Highway 234.

Cumulative Impacts. Except for the very minor loss of some land adjacent to the highway that could be hayed or grazed, no other cumulative impacts are foreseen from the proposed action. The utility relocations that may be required could motivate utility providers to update or make other improvements to their facilities within the project corridor.

Impacts of the No Action Alternative. The No Action Alternative would not require any additional right-of-way or affect existing utilities in the Beaver Creek County Park area. The proposed water developments would not require MDT to obtain any type of permanent or temporary interest in park land.

Mitigation Measures. The following measures would be implemented to minimize the right-of-way and utilities impacts associated with the proposed highway improvements:

- *MDT's Right-of-Way Bureau will continue to coordinate right-of-way needs with Hill County and other interests.*
- *MDT would coordinate with the appropriate utility companies prior to construction to determine the timing and details of relocating conflicting utilities.*

3. Transportation/Circulation Impacts

As described in detail in Part II, the existing road and bridges (including their approaches) have physical deficiencies that contribute to reduced safety for users of Highway 234. This route presently serves as the only paved roadway for visitors to access developed recreation sites (including the MDFWP's Fishing Access Site at Bear Paw Lake) and dispersed recreational lands in the park. The highway functions as the principal internal circulation corridor for visitors to move between recreation sites within the park.

Impacts of the Preferred Action. The reconstruction of Highway 234 through Beaver Creek County Park would provide traffic safety benefits and a more efficient facility for local residents, those recreating in the park, and other road users. Road design and construction would address safety issues by increasing the width of the roadway, flattening fill slopes adjacent to the road, adjusting grades, curve radii, surfacing, and sight distance, and incorporating other safety measures to produce a roadway that is safe for its intended use. These measures, plus those included in the Safety Management Plan required by Senate Bill 259 and being developed by MDT and Hill County, would help to reduce the chances for and severity of accidents. The highway would be reconstructed to MDT standards that reflect designs appropriate for both the type and level of traffic using this traffic facility.

No long-term changes to overall travel patterns would be likely due to the reconstruction of the highway and provision of new bridges. Traffic volumes on the road would not be expected to substantially increase over present conditions.

Cumulative Impacts. The proposed highway reconstruction and bridge project would not encourage new or undesirable growth in the Beaver Creek County Park area. This conclusion was reached because the action of building new bridges to replace existing structures alone would not cause more people or businesses to move to the area. If growth were to occur in the area, it would be the result of factors other than simply providing a new road and three new bridges.

Impacts of the No Action Alternative. The No Action Alternative would not change current operational conditions on Highway 234. The implementation of a Safety Management Plan for the route in lieu of highway fencing would be expected to improve traffic safety, especially during periods when livestock grazing occurs in the park.

Mitigation Measures. The following measures would be incorporated into the proposed project to minimize impacts to traffic and circulation:

- *MDT would maintain traffic through the project area during construction by allowing continued use of the road and by installing detours and temporary structures at the sites of the proposed bridge replacements.*
- *MDT would maintain access to properties adjacent to Highway 234 and intersecting roads and approaches throughout the construction period.*

- *Delays to traffic during construction would be minimized.*

4. Social Impacts/Environmental Justice

Historic and Projected Population. The project area is located in a rural portion of Hill County south of Havre. The City of Havre's population was estimated to be about 9,621 and Hill County's population was estimated to be 16,673 as of the date of the 2000 Census (March 21, 2001data releas4e http://ceic.commerce.state.mt.us/C2000/PL2000/index.htm). This information suggests that since 1990, the populations of both Havre and Hill County have declined by about 5.6 percent. Since 1980, the County's population has declined by more than 7 percent and the City of Havre's population has decreased by 11.6 percent.

Projections of population obtained from the MONTANA DEPARTMENT OF COMMERCE (MDOC) Census and Economic Information Center suggest the County's total population will remain constant or grow slightly over the next two decades. (NPA Data Services, Inc., October 2000, MDOC data release, http://ceic.commerce.state.mt.us/Demog/project/npa99mt.htm).

Key Population and Socio-Economic Characteristics. Detailed population and socio-economic data for residents of Powder River County is periodically collected and distributed by the U.S. BUREAU OF THE CENSUS and the Montana Census and Economic Information Center of the MDOC. Based on data from these sources, the following characteristics are evident for county residents:

- Minorities were estimated to comprise about 20 percent of the County's population as of the date of the 2000 Census.
- About 12.8 percent of the County's residents were over the age of 65 as of the date of the 2000 Census.
- The 1997 median household income in Hill County was estimated to be $30,736.
- The estimated per capita personal income for County residents was $20,789 in 1998. The County ranked 14th out of the State's 56 counties for this income category.
- An estimated 19.2 percent of all County residents lived below the poverty line in 1997.
- The average household size was 2.53 persons at the time of the 2000 Census.

Impacts of the Preferred Action. **Executive Order 12898**, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, signed by President Clinton in 1994, has been observed for this proposed project. This proposed action would not have any significant impact on the location, distribution, density or growth rate of the population of Havre or Hill County. The proposed highway reconstruction project would not adversely affect any social or ethnic groups and it would not isolate or divide existing residential areas. Nor would they cause a disproportionately high adverse human health or environmental effects on minority and low-income populations. The proposed project also complies with the provisions of *Title VI* of the *CIVIL RIGHTS ACT* (**42 U.S.C. 2000d**, as amended) under the FHWA's regulations (23 CFR 200).

Cumulative Impacts. The planned highway improvements would not result in any cumulative effects on the overall population of the project area or any particular social or ethnic groups. As indicated previously, Hill County's population has been declining for several decades. Improving highway facilities in area would not, by itself, cause increases in population or encourage new development.

Impacts of the No Action Alternative. This alternative would not require the acquisition of land and would not displace households, businesses, or other areas used for human activities. Taking no action would not influence population growth or distribution in Hill County or surrounding counties.

Mitigation Measures. None required or proposed.

5. Economic Impacts

The economy of Hill County is diversified with farming, ranching, hospital and health services, education, professional and retail business, manufacturing and railroad being the principal industries. In 1998, services comprised the largest industry in the County followed by transportation and public utilities, and state and local government (U.S. BUREAU OF ECONOMIC ANALYSIS (BEA) Regional Facts BEARFACTS, 1988-1998).

Although agriculture is a major industry in the County, employment in non-farm industries (services, retail trade, state and local government, etc.) comprise the largest industrial sector in the County's economy. Of the estimated 10,011 full and part-time jobs in the County in 1998, non-farm industries accounted for about 64% of the total employment (Regional Economic Information System (REIS) for Hill County, U.S. BUREAU OF ECONOMIC ANALYSIS, 1998). REIS data also shows that farm employment comprised only about 8 percent of all full and part-time jobs in Hill County in 1998. The largest employers (with 200+ employees each) in the County during 1999 were Northern Montana Health Care, the Burlington Northern Santa Fe Railway, the State of Montana (MSU-Northern), the Havre School District, and the federal government (MDOC internet data -http://commerce.state.mt.us/ceic/business/majoremp99.htm).

Farms and ranches in the county primarily produce grain (winter wheat, spring wheat, oats and barley), hay, and livestock (cattle, sheep, and hogs). According to the 1997 Census of Agriculture, the number of farms in the County remained relatively constant at about 700 over the 1987 through 1997 period. Over the same period, the average size of farms in the county also changed little. The BEA's BEARFACTS publication indicates that the farm industry was one of the slowest growing industrial sectors in Hill County over the 1988-1998 period.

The City of Havre is the seat of government and the economic center of Hill County. The community provides the principal place of residence for about 60 percent of the County's population and is the principal place where many goods and services are purchased.

Impacts of the Preferred Alternative. Improved safety for road users would decrease the potential for serious motor vehicle accidents. The associated economic costs associated with treating victims of fatal and injury accidents would be decreased accordingly.

The Preferred Action would not cause any long-term changes in the economy of the project area or Hill County the proposed projects would not adversely affect the economy of Hill County or the City of Havre. Temporary jobs would be created during this road reconstruction and bridge replacement project. Also the demand for local goods and services (food, lodging, recreation, etc.) in Havre could be increased due to the presence of workers temporarily living in the area.

Cumulative Impacts. The cumulative economic impacts of the proposed road reconstruction and bridge replacement projects would be negligible. Reconstructing the road and replacing the existing bridges would not cause more people or businesses to move to the Beaver Creek area.

Impacts of the No Build Alternative. This alternative would not change economic conditions or cause any new economic impacts to residents or businesses in the project area. MDT would still be obligated to budget funds to maintain the existing facility or perform spot improvements.

Mitigation Measures. The following measures would be implemented to minimize any economic impacts of the proposed project:

- *MDT would maintain traffic through the project area during construction.*
- *Access to lands adjacent to the project would be perpetuated during construction.*

6. Noise Impacts

Ambient noise levels along Highway 234 within Beaver Creek County Park are currently low due to the low density of development in the area and relatively low traffic volumes. The picnic areas, recreation areas, playgrounds, active sports areas, and other land uses within the park fall within Activity Category B according the Noise Abatement Criteria (NAC) listed in 23 CFR 772. The generally established maximum exterior noise level for such uses is 67 dBA Leq(h). The term dBA Leq(h) refers to equivalent hourly noise level (in decibels on the A-weighted scale). Undeveloped lands in the park fall within Activity Category D and the NAC does not specify an associated maximum noise level for this category.

Impacts of the Preferred Action. Detailed noise analyses are required only for projects that would build a highway on a new location, physically alter the existing roadway to significantly change its horizontal or vertical alignment, or increase the number of through traffic lanes. According to MDT's "Noise Policy," a significant change in alignment would occur of the horizontal distance between the highway centerline and the noise receiver was halved or if changes in the profile of the road are 6 m (20 feet) or more. This project involves reconstruction of an existing road and several bridges with only minor changes in horizontal alignment. MDT did not perform a detailed noise analysis because the project would not cause a significant change in the horizontal alignment of the existing highway.

The operation of heavy equipment during the construction of the road and bridges or new water developments would generate noise potentially noticeable to persons recreating in the county park. Pile drivers, cranes, road grading equipment, and portable generators would be likely sources of construction-related noise. Noise effects would be temporary, localized to work areas, and would occur at various times during the construction period.

Cumulative Impacts. The proposed road reconstruction and bridge replacement projects would not result in any cumulative noise impacts.

Impacts of the No Action Alternative. This alternative would cause no further traffic noise impacts within the project area. The operation of heavy equipment needed to construct new water developments could generate noise potentially noticeable to those recreating within the county park. Such impacts would be temporary and localized to the area of construction.

Mitigation Measures. The following measure would be implemented to minimize potential noise impacts associated with road reconstruction and bridge replacement.

- *MDT would consult with Hill County to determine if the hours of construction activity should be restricted in the vicinity of developed campsites along Highway 234.*

7. Hazardous Materials/Substances

MDT reviewed the project area for potential sources of hazardous waste and examined records of known hazardous waste sites and hazardous waste generators in the vicinity. Based on this evaluation, no hazardous materials concerns or sources of hazardous wastes were identified. Treated timbers were used to construct three bridges within the project area proposed for replacement under the proposed action. If not salvaged, the timbers would require proper disposal at a licensed landfill.

Impacts of the Preferred Action. Special provisions for salvaging and disposing of treated timber decking and abutments from the one of the bridges would be included in the contract plans for the project. Disposal of non-salvageable and leftover materials would be in accordance with all applicable laws, rules, and regulations, including the *MONTANA SOLID WASTE MANAGEMENT ACT*. If not salvaged by Hill County, timber decking and abutments must be disposed of only in a licensed Class II landfill. Burning or burial of treated timbers would not be permitted as a means of disposal.

The contractor would be required to take precautions to minimize the effects of construction operations, and to prevent leakage or spilling of fluids from construction equipment.

Cumulative Impacts. The cumulative impacts of the generation and handling of hazardous materials for the proposed project would be negligible.

Impacts of the No Build Alternative. This alternative would have no impacts on hazardous waste sites, generators, or substances. A low potential for the release of hazardous fluids exists since MDT would operate trucks and other heavy equipment during the performance of required maintenance activities within the dedicated highway right-of-way.

Mitigation Measures. The following measures would be implemented to minimize the potential for hazardous materials impacts.

- *The contractor for the project would be required to store fuel and other hazardous materials away from surface waters and wetlands to reduce the potential adverse effects of an accidental spill.*
- *The contractor for the project would be required to plan for and implement containment procedures in response to any accidental spills of fuel or other hazardous materials.*

8. Impacts to Archaeological and Historical Resources

Cultural resources are protected by the *NATIONAL HISTORIC PRESERVATION ACT OF 1966,* as amended **(16 U.S.C. 470 et seq.)**. This law and its implementing regulations require the identification and evaluation of significant historical resources that a project may impact. It further requires that resources so identified be avoided, if possible, or when avoidance is not possible, that any adverse effects of the project on the resources be mitigated. Coordination is also required with the MONTANA STATE HISTORIC PRESERVATION OFFICE (SHPO) and the ADVIOSRY COUNCIL ON HISTORIC PRESERVATION (ACHP).

A cultural resource consultant for MDT inventoried the project area for cultural properties during May 1999. Prior to the field survey, a file search was conducted, background research was performed, and contacts were made with local individuals familiar with the archaeology of the Bears Paw Mountains and the history of Beaver Creek County Park. MDT's consultant also contacted the Blackfeet Tribe, the Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, and the Fort Belknap Indian Community prior to beginning field work for the cultural resources inventory.

The results of these efforts are summarized in a Cultural Resources Inventory published in January 2000. **TABLE 5** lists previously recorded and newly recorded cultural resource sites within the Highway 234 project corridor and presents their *National Register of Historic Places* (NRHP) eligibility status.

Table 5: Archaeological and Historic Sites in the Project Area

Site Number	Site Type	Description	NRHP* Eligible?
24HL1113	Prehistoric Site (newly recorded)	Prehistoric Activity Area (lithic scatter, animal bone, fire cracked rock)	Not Eligible
24HL304	Prehistoric Site (previously recorded)	Prehistoric Activity Area (rock cairn, debitage, animal bone, fire cracked rock)	Not Eligible
24HL1114	Prehistoric Site (newly recorded)	Prehistoric Activity Area (lithic scatter, animal bone, fire cracked rock, formed tool)	Not Eligible
24HL309	Prehistoric Site (previously recorded)	Prehistoric Temporary Camp (stone circle and rock cairn)	Not Eligible
24HL310	Prehistoric Site (previously recorded)	Prehistoric Activity Area (lithic scatter, bone fragments)	Not Eligible
24HL1115	Prehistoric Site (newly recorded)	Prehistoric Activity Area (lithic scatter, bone fragments)	Not Eligible
24HL1117	Historic Site (newly recorded)	Foundations and stone gateway at entrance to former Civilian Conservation Corps (CCC) camp	Not Eligible
24HL1119	Historic Road (newly recorded)	Remnants of the old road linking Fort Assiniboine Military Reservation and Havre	Not Eligible

* **NRHP** National Register of Historic Places

The SHPO concurred with MDT's NRHP-eligibility determinations for these sites in correspondence dated November 6, 2000. A copy of SHPO's letter is contained in **APPENDIX B**.

An area within Beaver Creek County Park used for contemporary prayer offerings was identified during field work for this proposed project. The site is located within a dense stand of riparian vegetation and prayer offerings have been tied to the branches of some trees near the highway. MDT examined the area and consulted with representatives of the Chippewa Cree Tribe from the Rocky Boy's Indian Reservation regarding the appropriate treatment of this site. Tribal representatives indicated they would relocate the offerings if the proposed project affects the present site.

Impacts of the Preferred Action. The Preferred Action would not affect archaeological or cultural sites in the Beaver Creek County Park area. The proposed work would not alter any sites identified by SHPO or by representatives of the Rocky Boy's Indian Reservation and the bridges to be replaced are not considered historic structures by the NRHP.

MDT reviewed the location of the contemporary cultural site in relation to the anticipated construction limits and determined the site would not be affected by the proposed project.

Cultural materials could be encountered during the construction of proposed water developments at twelve sites within the uplands of Beaver Creek County Park. Due to the minimal amount of ground disturbance necessary to install these water facilities, the potential for impacting cultural resources would be minimal. During October 2001, Hill County established the locations for the proposed water developments in the park and arranged for each site to be examined by a cultural resource specialist. The County's cultural resource specialist expects to complete a report summarizing the findings of site evaluations completed during early in 2002.

Cumulative Impacts. The Preferred Alternative would not have a cumulative or long-term impact on archaeological or cultural sites in the Beaver Creek County Park area. However, the likelihood for encountering cultural materials increases as new lands become disturbed by highway improvement projects and other ongoing and future developments in the area.

Impacts of the No Action Alternative. The No Action Alternative would not affect any archaeological or historic sites in the area.

Cultural materials could be encountered during ground disturbing activities associated with the proposed construction of water developments in upland areas of the park. As indicated above, the County identified specific sites for these developments and retained a cultural resource specialist to review each location.

Mitigation Measures. The following measures would be implemented to minimize potential impacts on cultural resources due to implementation of the proposed project:

- *If unanticipated cultural materials were encountered during construction, MDT would require the contractor(s) to temporarily suspend work in the immediate vicinity of the find until the significance of the cultural materials can be assessed.*

9. Impacts to *Section 4(f)* Properties

Section 4(f) of the *U.S. DEPARTMENT OF TRANSPORTATION ACT,* as amended, applies to federally-funded transportation actions that affect sites on or eligible for the NRHP, publicly-owned parks, recreation lands, and wildlife and waterfowl refuges. The proposed action lies entirely within the boundaries of Beaver Creek County Park, a park owned by Hill County. The park contains both undeveloped lands and developed sites for public recreation.

The proposed action would not affect NRHP-eligible sites or any wildlife or waterfowl refuges. However, MDT considers all lands and developed recreation sites within Beaver Creek County Park as being significant for *Section 4(f)* purposes.

Numerous year-round opportunities for recreation exist on lands within and near Beaver Creek County Park. The park offers many opportunities for dispersed recreation activities such as camping, fishing, hiking, horseback riding, picnicking, berry picking, and watching or photographing wildlife. Winter activities in the park include ice fishing, cross-country skiing, snowshoeing, sledding and some snowmobiling. Hunting and the use of firearms are not permitted in the park.

Developed recreation sites located immediately adjacent to or directly accessed from Highway 234 in the project area include (listed from north to south):

- Eagles Group Picnic Area
- Bear Paw Lake Complex (includes MDFWP's Fishing Access Site)
- Boy Scout Camp
- Woodring Memorial Picnic Area
- Daryl Marden Memorial Picnic Area
- Elks Picnic Area
- Camp Kiwanis (Youth Camp, Park Office)
- GN Retirees/Howdy's Hollow Picnic Area
- Ada/Shambo Camping Areas
- Rotary Fish Pond

FIGURE 6 shows the location of these recreation sites within Beaver Creek County Park. As the figure shows most developed facilities within the park exist south of Rotary Hill. Organized and group recreational activities frequently occur at Camp Kiwanis. Facilities at Camp Kiwanis include dormitory cottages, a swimming pool and change rooms, activity building and a dining and recreation building.

Impacts of the Preferred Alternative. When reconstructed, Highway 234 would permanently occupy a minor amount of additional park land due to the slight increase in pavement width and small adjustments to the horizontal alignment of the road. Clearing vegetation, reconstructing roadside slopes, and the using bridge detours would result in temporary impacts to park land adjacent to the existing highway. The Preferred Action would not affect developed recreation sites within Beaver Creek County Park but would require the reconstruction of the Highway 234 approaches to these sites.

The proposed project would not impact any facilities within the area of the county park leased to the MDFWP for its Bear Paw Lake Fishing Access Site. However, rebuilding roadside slopes and replacing an existing storm drainage pipe would cause a minor and temporary encroachment on the MDFWP-administered land. Perimeter fencing disturbed by the Preferred Action would be replaced and approaches to the FAS from Highway 234 would be rebuilt and resurfaced.

Although a sizable right-of-way area on park land would be necessary for proposed highway project, MDT concluded only the minor increase in the road's paved surface area would constitute a *Section 4(f)* use. In other words, the only *Section 4(f)* land used by the proposed transportation project would be the 1.2 m (3.9± feet) of additional road surface width MDT plans to build through the park. The total area of this *Section 4(f)* use was calculated to be 1.88 ha (4.63 acres). This minor occupancy of park land (representing 0.046% of the total park area) would not change the ability of the public to recreate within Beaver Creek County Park or adversely affect any of notable features or facilities within the park that qualify this area as a significant *Section 4(f)* resource.

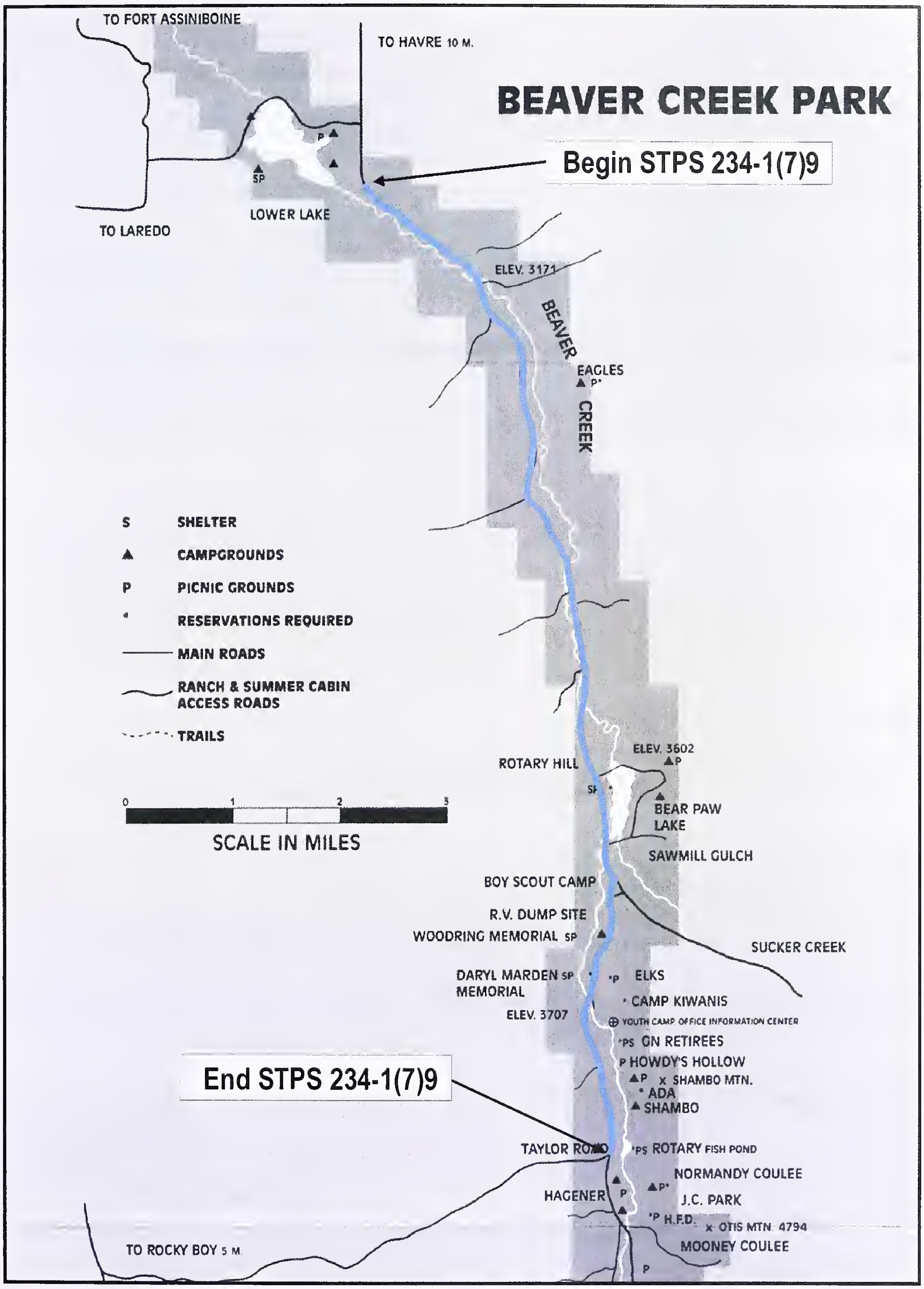


Figure 6:
Beaver Creek County Park & Developed Facilities

Highway 234 presently functions (and would continue to function) as the principal access route and internal circulation corridor for park visitors. The proposed reconstruction of roadside slopes would temporarily disturb park land. However, after the completion of the proposed project and the restoration of disturbed areas, the appearance and recreational use of lands immediately adjacent to the road would be generally unchanged from present conditions. The proposed project would not impair the ability of visitors to recreate at developed sites or on other undeveloped lands in the park. MDT's proposed highway project would improve the road's safety for highway users, many of who also recreate in the park.

The construction of water developments as an element of the Safety Mitigation Plan required by Senate Bill 259 would cause temporary impacts at as many as twelve locations in the uplands of Beaver Creek County Park. Hill County, the owners and administrators of the park, would oversee the design and construction of these water developments. The development of springs would provide other indirect benefits like improving water quality in Beaver Creek, reducing impacts to riparian vegetation caused by livestock, and more efficiently distributing livestock within the park.

MDT would use a combination of federal and state funds to reimburse the County for the costs of these facilities. Disturbances to park land associated with the spring developments would be temporary and limited only to the areas needed to excavate and install piping and storage tanks. MDT would have no need to acquire any additional permanent interest or easement on park lands. Hill County would locate the proposed water developments to avoid adverse effects to park features and developed facilities and recreational use of park land.

The FHWA has developed a "Nationwide" *Section 4(f)* Evaluation form for projects requiring minor uses of land from public recreation sites. The form is a *separate* document from the Environmental Assessment, and is intended to programmatically demonstrate compliance with the provisions of *Section 4(f)*. A copy of the completed "Nationwide" *Section 4(f)* Evaluation form for the Preferred Action's effects to lands within Beaver Creek County Park can be found in **APPENDIX E**.

MDT will request concurrence with its determination of *Section 4(f)* impacts and proposed mitigation from Hill County (the owners and administrators of Beaver Creek County Park) and MDFWP (the administrators of the Bear Paw Lake Fishing Access Site) following the circulation of this Environmental Assessment and "Nationwide" *Section 4(f)* Evaluation form.

Cumulative Impacts. No cumulative impacts on recreation sites would occur as a result of this proposed project.

Impacts of the No Action Alternative. This alternative would not affect any sites on or eligible for the NRHP or any wildlife and waterfowl refuges. However, the No Action Alternative would have a minor effect on publicly-owned recreation land in Beaver Creek County Park due to the planned installation of water developments in the park. The installation of water developments at various locations within the park would be accomplished as part of a Safety Mitigation Plan being implemented in lieu of fencing along Highway 234. MDT has committed to funding the the water developments as part of the Safety Mitigation Plan.

MDT's involvement in the development of springs would be as described previously under **Impacts of the Preferred Action**. MDT's actions would not result in a *Section 4(f)* use since the agency would not acquire any additional permanent interest or easement on park lands. The water developments are being undertaken by Hill County, the park owner and administrator.

Mitigation Measures. The following measures would be implemented to minimize the adverse *Section 4(f)* effects of implementing the proposed project:

- *MDT must provide at least 15.50 ha (38.29 acres) of replacement park land to Hill County to mitigate for the conversion of Section 6(f) encumbered land in Beaver Creek County Park (See* **10. Impacts to *Section 6(f)* Lands***).*

- *MDT would reconstruct the highway approaches to developed recreation sites in the park and replace existing fencing, signing, and cattle guards, and other facilities impacted by the proposed project.*

- *MDT would revegetate lands disturbed by construction with desirable plant species.*

- *MDT would incorporate several design exceptions to avoid or minimize environmental impacts to Beaver Creek and adjacent park land.. MDT would design and construct surfacing inslopes throughout the project at 5:1 for the first 2.7 m (8.8± feet) away from the road's edge instead of at 6:1. MDT would also adjust fill slopes from 4:1 to 2:1 at the bridge ends and one other location within the project area to minimize effects to Beaver Creek and adjacent wetlands.*

- *MDT and Hill County will implement a Safety Mitigation Plan for Highway 234 in Beaver Creek County Park in lieu of fencing the roadway corridor. The Plan will include a variety of measures to improve the overall safety of highway users (including park visitors), particularly during periods when livestock may be present.*

- *MDT would improve fish habitat in Beaver Creek near the existing highway crossing at Project Station 72+86 by developing deep-water habitat downstream from the new bridge.*

10. Impacts to *Section 6(f)* Lands

Section 6(f) of the *National Land & Water Conservation Fund Act* (**16 U.S.C. 460**) requires that coordination be done to determine if federal funds were used to acquire or improve any lands in the project area for recreation or water conservation purposes. The MDFWP, the agency that administers the Land and Water Conservation Fund (LWCF) in Montana, was contacted about the use of federal monies to acquire or develop facilities in Beaver Creek County Park.

The MDFWP stated in a letter dated June 2, 1999 that LWCF funding was used for the development of several projects at recreation sites within the park (this correspondence can be found in **APPENDIX B**). The MDFWP indicated that Hill County received federal financial assistance from the LWCF in two grants (identified as 30-00016 and 30-00238) to aid in the development of Beaver Creek County Park. MDFWP received LWCF assistance in three grants to aid in the development of the Bear Paw Lake FAS on land in Beaver Creek County Park leased from the County. These grants are identified as 30-00027, 30-00442, and 30-00607V.

The MDFWP's June 2, 1999 response also left the possibility open that all lands within the park may be encumbered by the LWCF. MDT requested that the MDFWP consult further with staff from the U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE - Midwest Region (NPS) to identify specific LWCF project descriptions and boundaries. The NPS responded that under LWCF program policy, *Section 6(f)* project boundaries are established as the entire park, open space, or recreation area being developed or added to as a result of the LWCF grants. Since records maintained by the NPS did not indicate that a lesser area of the county park was established as the official project boundary, the agency initially concluded all of Beaver Creek County Park was encumbered by the LWCF.

Due to the size of the county park and some confusion over the project boundaries for previous LWCF grants, the MDFWP and Hill County proposed to the NPS that the official project boundary be reduced to include only the portion of the park where most developed facilities exist. On behalf of Hill County, MDFWP requested the NPS to amend the official *Section 6(f)* project boundary to include only those lands south of the mid-section line of Section 28, Township-30-North, Range-16-West. The NPS concurred with this request on April 12, 2001. Correspondence about the revision to the *Section 6(f)* project boundary in the park can be found in **APPENDIX B**.

Impacts of the Preferred Action. As discussed earlier in this Part, the reconstructed road and bridges on Highway 234 would occupy a total gross right-of-way area of about 62.14 ha (153.54± acres) of land within Beaver Creek County Park. Of this total right-of-way area, the proposed project would occupy about 27.70 ha (68.45± acres) within the portion of the park encumbered by the LWCF.

MDT, MDFWP and the NPS agreed to recognize that a public road corridor for Highway 234 already exists within the *Section 6(f)* project boundary. This conclusion was reached because the county park was created from public land formerly administered by the BLM and a road with an associated corridor was used for public travel between Havre and Rocky Boy prior to the conveyance of BLM lands to Hill County. The involved agencies agreed to recognize the existence of an 18.28 m (60-foot) wide prescriptive easement as provided for by Montana statute (**70-19-404, M.C.A.**). The MDFWP and NPS also agreed to exempt the area within the assumed prescriptive easement, about 12.20 ha (30.16 acres), from *Section 6(f)* conversion. Therefore, about 15.50 ha (38.29 acres) of the 27.70 ha (68.45± acres) of new right-of-way area within the LWCF-encumbered portion of the park would be converted by this proposed project.

A letter from MDFWP (dated January 6, 2002) documenting the agencies concurrence with MDT's assessment of *Section 6(f)* impacts can be found in **APPENDIX B**.

MDT's participation in the development of springs within Beaver Creek County Park would not result in the conversion of any lands encumbered by *Section 6(f)*. The proposed spring developments would not require MDT to acquire any temporary or permanent interests on lands encumbered by *6(f)* funds. Work to develop springs would be accomplished by the owner and administrator of the *6(f)* property. The proposed water developments would not affect any facilities within the park built with the assistance of LWCF funding, including the MDFWP's Bear Paw Lake Fishing Access Site.

Cumulative Impacts. No cumulative impacts to *Section 6(f)* lands within Beaver Creek County Park or at other encumbered locations in Hill County would occur as a result of the proposed action.

Impacts of the No Action Alternative. There would be no conversion of lands or impacts to facilities acquired or developed with LWCF funds as a result of the No Action Alternative.

MDT's participation in the development of springs within Beaver Creek County Park would not result in the conversion of any park lands encumbered by *Section 6(f)*.

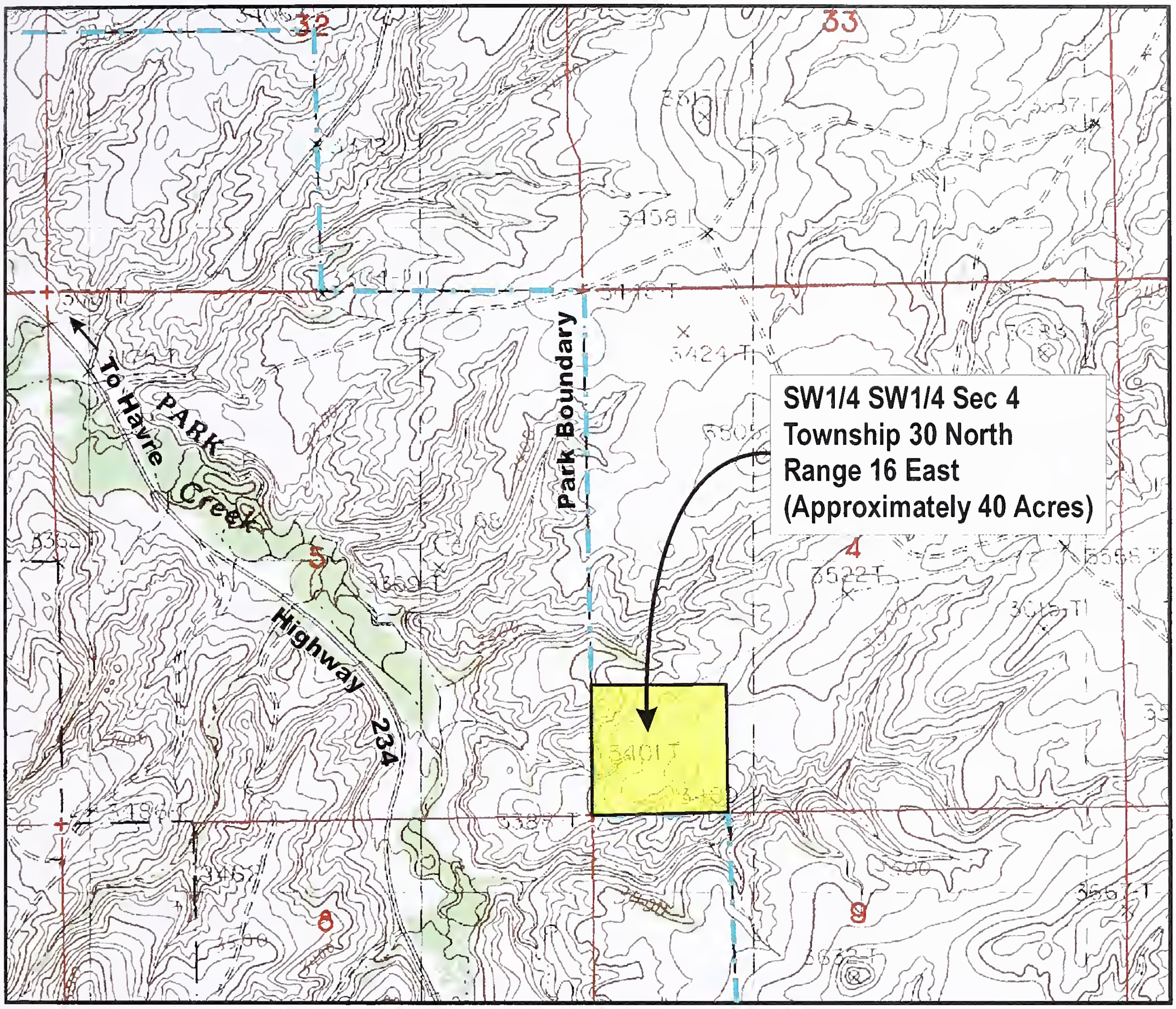
Mitigation Measures. Any *Section 6(f)* encumbered land rededicated to highway purposes under the proposed improvement project would be considered converted to other than public outdoor recreation use and must be replaced in compliance with the *NATIONAL LAND & WATER CONSERVATION FUND ACT*. According to 36 CFR 59.3 (3), replacement land must be of reasonably equivalent usefulness and location as that being converted.

As mitigation for the conversion of *Section 6(f)* land in Beaver Creek County Park, MDT must provide 15.50 ha (38.29 acres) of replacement park land to Hill County. MDT has worked with Hill County to identify potential parcels that could serve as replacement park land. Pat Conway, Chairman of the Hill County Commission, contacted and discussed the need for replacement park land with the owners of two properties adjoining Beaver Creek County Park. Based on these contacts, one of the landowners appears willing to sell 16.19 ha (40 acres) of property. The location of the replacement park land relative to the county park is shown in **FIGURE 7**.

MDT and Hill County are just beginning the work needed to determine the value of the property and secure an agreement to purchase the replacement park land. As indicated in the agency's January 6, 2002 letter (found in **APPENDIX B**), the MDFWP has concurred with MDT's proposed acquisition of replacement land adjacent to Beaver Creek County Park.

The following measures would also be implemented to minimize potential impacts on recreational resources and opportunities in the Highway 234 project area.

- *MDT would coordinate with Hill County to determine the need for installing temporary signs or other means of advance notice of ongoing construction work for those planning to recreate in the park.*
- *MDT would consult with Hill County to determine if the hours of construction activity on Highway 234 should be restricted due to the presence of recreation sites near the work zone.*



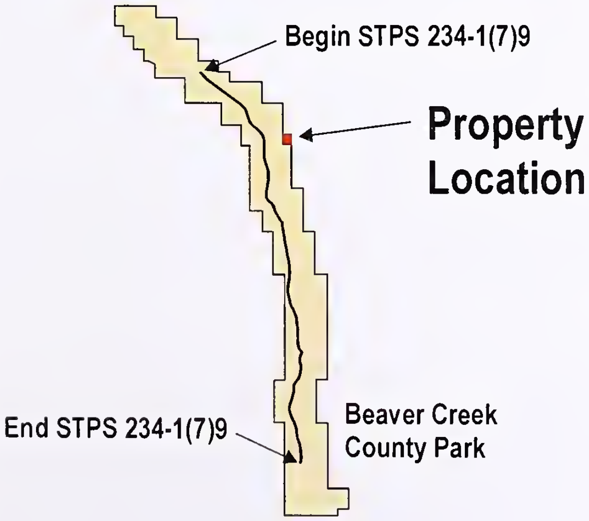


Figure 7: Location of Replacement Land For Section 6(f) Conversion

11. Pedestrian and Bicycle Facilities

Although counts are not available to quantify such use, the existing highway receives only limited use by pedestrians and bicyclists. Bicyclists on Highway 234 must use the existing road's minimal 0.3 m (1 foot) wide paved shoulder or travel lanes for riding through the project area. Pedestrians must also use the shoulder or roadside slopes for walking along the highway. Visitors are known to park vehicles along the road and walk "cross-country" to fish, pick berries, bird watch, or conduct other recreational activities.

Impacts of the Preferred Action. The Preferred Alternative would provide slightly wider road shoulders for use by pedestrians and bicyclists. The proposed road would be constructed to provide 0.6 m (2.0 feet) wide shoulders as compared to the minimal to 0.3 m (1.0 foot) wide shoulders that presently exists on Highway 234.

Construction activities would temporarily inconvenience cyclists and pedestrians in the area due to the need to disrupt the existing road surface and roadside areas. Overall, the safety of cyclists and pedestrians using the road and bridges would improve through the provision of a slightly wider road and new bridges.

Cumulative Impacts. Impacts on pedestrian and bicycle use of Highway 234 and the bridges to be replaced would be positive.

Impacts of the No Build Alternative. The No Build Alternative would not change current conditions for cyclists and pedestrians on Highway 234 through Beaver Creek County Park.

Mitigation Measures. None required or proposed.

12. Impacts to Visual Resources

The project area is situated in flat to gently rolling terrain in the "bottomland" of Beaver Creek County Park. Beaver Creek winds through the area and is seldom out of sight from the highway within the project area. Steeper and more rugged terrain with coulees exist east and west of Highway 234 and form the edges to the valley through which Beaver Creek flows. Throughout the project area, roadside terrain and hills are covered with various types of short grasses and stands of shrubs. Willow, dogwood, quaking aspen and cottonwoods are common along riparian areas, particularly in the southern portion of the project area. Conifers are also evident on hillsides and ridges in the Rotary Hill area and lands further south. The dominant man-made features include the existing road and bridges, roads and approaches joining Highway 234, and structures associated with recreation sites in the park.

Because of the nature of the project area, the viewshed (the land area seen from the project) is dominated by background landscapes (the uplands surrounding the park and the Bears Paw Mountains) and foreground landscapes (Beaver Creek and its riparian corridor and Bear Paw Lake structures associated with recreation sites). Those who see the existing facility and those who would see the highway if it was reconstructed include permanent and seasonal residents, recreational users of Beaver Creek County Park and lands in the Bears Paw Mountains, ranchers grazing livestock in the park, and other motorists passing through the area (mostly residents) on Highway 234.

Impacts of the Preferred Action. The Preferred Action would not change views of the background landscapes in Beaver Creek County Park from the highway. However, this alternative would cause minor changes to the foreground landscape of the highway corridor. The width of the new roadway would be slightly greater than that of the existing facility due to its increased pavement width and revised roadside slopes. This expansion of the highway may be noticeable to those most familiar with Beaver Creek County Park but these changes would be imperceptible to most visitors. In only few seasons after construction, the roadway corridor would be expected to look virtually the same as it does today.

The Preferred Action would cause minor, short-term visual impacts during the construction period. Visual changes during construction would include: surface disturbances and clearing until seeded areas grow in; temporary sign installations; the storage of excavated material, equipment, and material; and dust and debris from construction activities.

Cumulative Impacts. No cumulative impacts on visual resources in the area would result from this proposed project since it would replace existing road and bridge features.

Impacts of the No Action Alternative. There would be no change in the visual appearance of the project area due to continued highway maintenance actions by MDT.

Other than the ground disturbances associated with their construction, the proposed water developments in the park would result in few if any visual impacts. The proposed developments typically occur in remote areas of the park and would be out of view from most visitors.

Mitigation Measures. The following measure would be incorporated with the proposed project to offset potential visual impacts:

- *Disturbed areas would be reseeded as quickly as possible after construction.*

13. Other Secondary and Cumulative Impacts

Secondary (or indirect) effects are those that are caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable. Secondary impacts are generally induced by the initial action and comprise a wide variety of effects such as, changes in land use, water quality, economic conditions, or population density. The secondary impacts of this proposed project are addressed in appropriate sections of this Part.

Cumulative impacts are those effects that result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions regardless of what agency (federal or non-federal) undertakes such actions. Projects planned, under construction, or recently completed by MDT and others in the vicinity were reviewed to help assess the cumulative impacts of this proposed project.

MDT currently has one active project known as "Beaver Creek Bridge 17.1 km South of Havre" [Project BR 234-1(5) 11] on Highway 234. This bridge replacement, which lies within the limits of the "14.9 km South of Havre-South" road reconstruction project, would replace the existing two-span timber structure over Beaver Creek located 17.1 km (10.6 miles) south of Havre. The new structure would be built on or near the existing alignment and the bridge's new approaches have been designed to be compatible with the planned highway improvements in Beaver Creek County Park. The project has been advanced by MDT due to the critical need to replace the bridge and because the project was developed using a different source of federal highway funds. The bridge replacement project should be completed during the 2002 construction season.

Hill County is beginning a project to assess the condition of and develop a work plan for improvements to Beaver Creek Dam. This facility is located on Beaver Creek north of the proposed highway project. The proposed work at the dam would not affect the planned highway improvements in Beaver Creek County Park. Likewise, improving Highway 234 would not affect the facilities or operation of Beaver Creek Dam.

There are no other known active or planned projects that would occur in the Beaver Creek County Park area. For this reason, no other projects would likely cause cumulative effects on the project area nor would the proposed project affect other projects in the general area.

MDT would coordinate its future projects on Highway 234 with the public and other appropriate agencies, review the potential impacts to the environment, and identify requirements for mitigation of any adverse effects as projects are developed and implemented.

14. Construction Impacts

Impacts of the Preferred Action. Bridge and road construction activities associated with the Preferred Action would cause temporary inconveniences to the traveling public and to area residents. These inconveniences may include slightly longer travel times, minor detours, temporary closures of the road and/or bridges, and the noise and dust generated by construction equipment. These impacts could be expected to occur for about six months after the proposed construction begins. Impacts associated with the construction of the Preferred Action are described below:

- **Noise and Vibration.** The operations of heavy machinery like earth moving equipment, paving equipment, power tools, and trucks would create periods of undesirable noise in the project area. Noise due to construction activities would produce short-term impacts for residents and business owners near the highway. Construction-related noise may also temporarily displace some wildlife and bird species from the area or deter such species from using habitats in the vicinity of the roadway.

- **Dust.** The operation of heavy equipment on disturbed areas could produce dust.

- **Water Quality.** Runoff from disturbed surface areas has a minor potential to enter surface waters and adversely affect water quality. Petroleum products and other materials could be spilled during the operation and maintenance of equipment needed to build the new highway facilities.

- **Visual.** Stockpiles of materials and equipment needed for the construction of the new roadway and bridges may cause short-term adverse impacts for park visitors and others passing through the project area.

- **Traffic.** Few, if any, disruptions to traffic are anticipated since the existing road would remain in use during the construction period. Detours would be needed to maintain traffic flows through work zones and around bridge replacements.

At the present time, no borrow source(s) for road fill material needed for construction of the proposed project has been identified. The contractor(s) selected for the proposed project must identify and develop any necessary borrow sources and truck the needed material to the work zone. This would cause a minor increase in truck traffic on Highway 234 and any other roads used for travel to and from the borrow area.

Impacts of the No Action Alternative. The only construction impacts associated with this alternative would be related to the completion of maintenance activities on the existing road and bridges.

Temporary ground disturbances and noise would be result from the use of equipment to develop and install springs at various locations in the county park.

Mitigation Measures. Construction impacts would be mitigated through the establishment and enforcement of control measures such as:

- *The contractor would be subject to all state and local laws to minimize construction noise by having mufflers on all equipment.*

- *Dust generated through construction activities and road use would be controlled by the required use of either water or another approved dust suppressant.*
- *Erosion control measures would be employed to prevent sediments from reaching the area surface waters or wetlands.*

- *Temporary or permanent seeding and mulching would be used to control erosion of disturbed areas.*

- *The contractor(s) would be required to have plan for implementing appropriate measures in the event of an accidental spill.*

All work related to the proposed Highway 234 improvement project would be subject to the provisions included in the current edition of *Standard Specifications for Road and Bridge Construction* as adopted by MDT and the Montana Transportation Commission.

15. Permits Required

The No Action Alternative would not require MDT to obtain any permits. The Preferred Action for the proposed road reconstruction and bridge replacements on Highway 234 south of Havre would require the following permits to be obtained prior to any relevant disturbances:

- ***Section 3(a)* Authorization/*124SPA*.** The proposed project would be in compliance with the provisions of both Water Quality for *Section 3(a)* authorizations under **75-5-401 (2) M.C.A.** and Stream Protection under (**87-5-501** through **509 M.C.A.**, inclusive).

  A ***124SPA*** Stream Protection Permit is required by the MDFWP.

  All work would also be in accordance with the *WATER QUALITY ACT OF 1987* and the *WATER QUALITY ACT OF 1987* (**P.L. 100-4**), as amended.

- ***Section 402* Permit.** The proposed project would be in compliance with the *CLEAN WATER ACT* (**33 U.S.C. 1251 - 1376**) - *Section 402/*Montana Pollutant Discharge Elimination System. Accordingly, MDT would notify the MDEQ of the intent for the proposed projects to be covered under the General Permit for storm water discharges associated with construction activity.

- ***Section 404* Permit.** A *CLEAN WATER ACT* (**33 U.S.C. 1251 - 1376**) - *Section 404* permit from the COE would be required for placing fill in wetlands or for the discharge of dredged or fill material associated with culvert and bridge replacements. The COE would determine if the proposed projects qualify for "Nationwide" permits under the provisions of 33 CFR 330.

- **Floodplain Development Permit.** A Floodplain Development Permit would be required from Hill County for the proposed work in the delineated floodplain of Beaver Creek within the project area.

V. Coordination with Others

V. Coordination with Others

A. Agency Coordination

Representatives of MDT and the FHWA are developing the proposed 14.9 km South of Havre South project under Montana's Surface Transportation Program (STP) and the Highway Bridge Replacement and Rehabilitation Program (HBRRP). Hill County is a Cooperating Agency on this proposed project due to its jurisdiction and ownership of the road. Meetings with Hill County were held during the development of this environmental document and preliminary design plans for the proposed highway improvements.

Coordination with permitting and resource agencies has informally occurred during the development of the project through correspondence requesting comments and/or needed information. The following agencies and parties were consulted during the development of this Environmental Assessment:

- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Fish and Wildlife Service
- U.S. Department of Interior, National Park Service (Midwest Region)
- Federal Highway Administration (Montana Division Office)
- U.S. Department of the Army, Corps of Engineers
- Montana Department of Fish, Wildlife & Parks
- Montana State Historic Preservation Office
- Montana Department of Environmental Quality (Permitting and Compliance Division)
- Natural Heritage Program, Montana State Library

B. Public Involvement Activities

1. Project Notices/Early Meetings

MDT prepared and distributed an initial news release about planned improvements to Highway 234 on January 2, 1996. The news release indicated MDT's intentions at that time to overlay Highway 234 in Beaver Creek County Park and to upgrade or replace existing bridges. MDT issued a second news release in February 1998 that announced the FHWA's approval of a planned pavement rehabilitation project on Highway 234 in Beaver Creek County Park. The limits of the planned rehabilitation project announced in 1998 are similar to the limits of the currently proposed 14.9 km South of Havre South project.

No comments were received by MDT following either 1996 or the 1998 news releases.

In January 1999, MDT staff met to discuss options for the proposed project and ultimately determined total reconstruction was the most desirable development option for this section of Highway 234. On March 15, 1999, MDT informed the Hill County Commissioners of the recommended change in the scope of the project. The Commissioners were advised that federal money could only be allocated to the project if certain safety issues were addressed and that partial or total reconstruction were the only ways to alleviate the safety concerns associated with the highway's design. The Commissioners agreed with MDT's findings and concurred with a recommendation to change the scope of the work for the "South Section" of Highway 234 from an overlay to total reconstruction. The decision allowed MDT to proceed with the development and preliminary design activities for the 14.9 km South of Havre South project.

2. June 8, 1999 Public Meeting

MDT held a public information meeting about this proposed project on June 8, 1999 at the City Council Chambers in Havre. The meeting began at 7:00 p.m. and lasted until about 9:15 p.m. and was attended by some 50 people. The meeting was held to advise the public that the proposed scope of work for the project on Secondary Highway 234 had changed from limited reconstruction to total reconstruction. MDT used the meeting as an opportunity to review preliminary design plans for the roadway and associated bridge replacements and to solicit comments on issues or concerns that should be considered in the environmental document for the project.

The meeting convened shortly after 7:00 p.m. and was moderated and tape recorded by MDT's Public Affairs Office. The meeting was opened with a general introduction of participants, a description of the purpose of the meeting, and a discussion of how the public could comment on issues pertinent to the proposed project. The Supervisor of MDT's Great Falls District Road Design Section highlighted major design features of the project and discussed pertinent environmental and safety issues. Following the presentation, the public was given an opportunity to ask questions or make comments about the project. Following a lengthy "question and answer" session, the meeting concluded around 9:15 p.m.

Public comments heard at the June 8, 1999 informational meeting and written comments received through July 1999 were reviewed to identify issues or concerns expressed about the proposed project. By mid-July1999, MDT received nearly 30 written comment forms (distributed at the June public information meeting) and a petition signed by almost 1,500 people. Virtually all of the written comments received and the petition received by MDT were directed at MDT's proposal to fence the highway right-of-way. Key comments obtained as a result of the public information meeting are summarized below.

- Beaver Creek County Park is a unique situation and the "open range" fencing law should not apply to this part of the State highway system.
- Livestock are not in the park during the peak periods for public recreation.
- Installing a fence to restrict livestock for only a short period each year is not appropriate.
- Fencing will disrupt grazing in the park and pose a hardship on local ranchers.
- Fencing will detract from the overall aesthetics (natural appearance) of the park.

- Fencing will inhibit recreational use of parklands.

- Fencing will consume useable acres of land in the park reducing the opportunity for income from haying and grazing.

- Fencing the road corridor could lead to over and under grazed areas and could contribute to accelerated soil erosion, noxious weed establishment, constant pressure on parts of the fence, and deteriorated riparian communities and water quality.

- Other factors (driving under the influence, speeding, driver negligence) are the reasons for most accidents involving livestock. Motorists are warned of the possibility of cattle within the park and should use caution while driving in the park.

- The fence will be difficult to build along the roadway corridor and its construction would cause notable impacts to wetlands and riparian areas.

- Fencing the right-of-way will not prohibit deer or other wildlife from being on the road and it could lead to more frequent such collisions with wildlife since animals would be confined to the fenced roadway corridor.

- The fence will be costly and difficult for Hill County to maintain.

The vast majority of the public comments heard at and following the public information meeting suggested that a fence is not needed or wanted by local residents. There is a widely held opinion that most accidents on the roadway are the result of alcohol use, traveling too fast, and generally not being a responsible driver. The majority of those offering comments appeared willing to accept the continued presence of livestock in the park and potentially on the roadway during part of the year.

3. Establishment of Highway 234 Advisory Committee

MDT and Hill County reviewed the public's comments about fencing and met on August 23, 1999 in Helena to discuss ways to address concerns over fencing and advance the proposed action. MDT and the Hill County Commissioners concluded that a local advisory committee should be formed to help identify ways to help resolve the fencing dilemma.

By the end of August 1999, the Hill County Commissioners began their efforts to establish an advisory committee to study ways to meet MDT's mandated requirement to fence the road and address local desires to maintain cattle grazing and minimize effects on recreational activities in Beaver Creek County Park. The County invited a variety of "stakeholders" to be members of an advisory committee for the project including: MDT representatives, members of the Hill County Park Board and local conservation district, local residents, cabin owners, ranchers who graze cattle in the park, and others with interests in Beaver Creek County Park. Ultimately, sixteen people agreed to serve on the Highway 234 Advisory Committee and a local planner was chosen by the Hill County Commissioners to facilitate meetings of the group.

4. Highway 234 Advisory Committee Meetings and Actions

The first meeting of the Highway 234 Advisory Committee was held in September 1999 and the group met four more times before the end of January 2000. Meeting dates included:

- September 22, 1999
- November 10, 1999
- January 12, 2000
- January 26, 2000

The Advisory Committee's initial meeting in September 1999 began with the development of goals and a general discussion of issues that should be considered by the committee. During the meeting in November 1999, the Committee received needed background on the open range fencing law and MDT's traffic safety study and began discussing potential design options for a fence. The November meeting also marked the establishment of two working groups - one charged with working with local state legislators to seek a waiver to the fencing requirement and the other to identify specific fencing options.

The working group of the Advisory Committee met on December 1, 1999 in Beaver Creek County Park and on January 5, 2000. These meetings were held to establish possible locations, develop schematic maps of fence options, and to refine the highway fencing concepts for presentation to the entire Advisory Committee at the January 12, 2000 meeting. The Advisory Committee considered and evaluated several fencing options developed by the working group including: 1) strict fencing at the edge of roadway clear zone; 2) east-west cross fencing; 3) enlarged/expanded corridor fencing; and 4) variable roadway corridor fencing.

The Highway 234 Advisory Committee ultimately recommended the Hill County Commissioners adopt the "Variable Corridor Fencing" option as a preferred location for highway fencing in the county park. Under this proposal, the fence would be placed varying distances from the roadway depending upon the location within Beaver Creek County Park. In some locations, the fence would be built at the edge of the clear zone as originally proposed by MDT. In other areas, the fence would be located away from the highway to minimize involvement with Beaver Creek and to exclude cattle from developed recreation sites. This fencing concept was preferred because it was viewed as a "compromise" between several fencing options supported by members of the Advisory Committee and the public.

At the January 26, 2000 meeting, the Advisory Committee also presented MDT and the Hill County Commissioners with a draft document outlining its recommendations. The recommendations indicated the Committee's preference was to seek a waiver to the state law requiring highway fencing, identified the preferred fencing option (if legislative efforts to secure a waiver were unsuccessful), and listed a number of other actions that could be implemented to make Highway 234 safer.

All meetings of the Advisory Committee were open to the public and comments from those present were requested. A reporter from the *Havre Daily News* was present at most meetings and follow-up articles appeared in the newspaper. The Hill County Commission also prepared written minutes of each meeting. Copies of minutes and other committee proceedings are on file with MDT staff in Havre (Ross Gammon), Great Falls (Mick Johnson), and Helena (Environmental Services and Robert Peccia & Associates, Inc.).

5. May 24, 2000 Open House Meeting on Fencing Options

To convey the work done by the Advisory Committee, the Hill County Commissioners and the Advisory Committee held a public meeting to present fencing ideas for Beaver Creek County Park. The meeting was held on May 24, 2000 at the Hill County Library between 4:00 p.m. and 8:00 p.m. The purpose of the open house meeting was to allow for a public review of the fencing proposal favored by the Committee and to obtain comments on the recommended proposal and other fencing options. Sixty-four (64) people signed the attendance list at the meeting.

The Hill County Commissioners received thirty-one (31) written public comments during the prescribed comment period after the meeting. A review of the written comments showed no clear-cut support for any fencing option and reaffirmed public sentiments for not fencing the road in Beaver Creek County Park. Copies of the attendance list, written comment forms, and a summary of comments are on file with MDT in Helena (Environmental Services and Robert Peccia & Associates, Inc.).

After considering comments received at the May 2000 open house meeting, the Hill County Commissioners endorsed the "Variable Corridor Fencing" concept as their preference if efforts to secure a waiver from the state law requiring fencing are unsuccessful.

6. Legislative Action Waiving Fencing Requirement

As a result of local lobbying efforts, Havre area legislators drafted and introduced a bill (known as Senate Bill 259) during the 2001 Legislature to exempt Highway 234 (and other primary, secondary, or county roads) from the fencing required by **60-7-103, M.C.A.** provided certain criteria are met to mitigate safety hazards presented by free-ranging livestock. The bill outlines provisions that no longer require MDT to install fencing for highway reconstruction projects if other measures, including the development of an accident mitigation plan, are implemented to make the road safer for motorists.

Senators Jon Tester (Primary Sponsor) and Greg Jergeson and by Representatives Matt McCann, John Musgrove, and Merlin Wolery introduced Senate Bill 259 on January 16, 2001. During the 2001 Legislative session, Senate Bill 259 was heard and debated before both the Montana Senate and House of Representatives. Public hearings on the bill were held before the Senate Agriculture, Livestock, and Irrigation Committee on February 7, 2001 and before the House Agriculture Committee on March 8, 2001. Senate Bill 259 was unanimously passed by both the Senate and the House and signed by the Governor on April 5, 2001.

7. Planned Public Involvement Activities

A Notice of Availability of the Environmental Assessment and planned date for a Public Hearing on the South of Havre-South project will be mailed to all parties on the mailing list and advertised in local newspapers. The notice will be published in area newspapers to inform the general public of the hearing. The date of the Public Hearing will be advertised at least fifteen days in advance of the meeting.

At the public hearing, the general public will be given the opportunity to provide official comments on the proposed action. Written comments on the Environmental Assessment will be received for at least thirty (30) days following its distribution. After the close of the official comment period, comments received on the document will be reviewed and the text of the Environmental Assessment will be modified as required.

If no significant impacts are identified, MDT will submit the revised Environmental Assessment to FHWA and request that the agency make a Finding of No Significant Impact (FONSI). The FONSI will then be attached to the Environmental Assessment. If significant impacts are found, then MDT and FHWA must determine if an Environmental Impact Statement (EIS) must be prepared to advance the proposed action.

C. Chronological Summary of Project Actions

The following presents a chronological summary of major actions that have occurred during the development of the 14.9 km South of Havre South project:

September 1, 1994	Hill County's request for increasing the length of Secondary Highway 234 was approved by the Highway Commission.
1995	MDT and Hill County began working in earnest to improve Highway 234 after the Secondary Route was extended. Havre-South project STPS 234-1(4) 0 established with "North" and "South" Sections identified. Only the South Section (the currently proposed 14.9 km South of Havre South project) was programmed for development by MDT.
January 1996	MDT issues initial news release indicating plans for overlaying Highway 234 and upgrading or replacing bridges.
1996-1998	Project development activities and preliminary design work for the "South Section" of Highway 234 continued. Second news release issued in 1998.
January 1999	MDT meets internally to discuss options for the proposed project and ultimately determined total reconstruction was the most desirable development option for "South Section" of Highway 234.
March 1999	MDT meets with the Hill County Commissioners to discuss proposed changes to scope of the project. The Hill County Commissioners agreed with MDT's findings and concurred with a recommendation to change the scope of the work for the "South Section" of Highway 234 from an overlay to total reconstruction. MDT proceeds with development activities for project identified as "14.9 km South of Havre South" -- STPS 234-1(7).
June 8, 1999	MDT holds Public Information Meeting in Havre to advise public of change in project scope. Numerous comments opposing fencing received.
August 23, 1999	MDT, FHWA, and Hill County Commissioners meet in Helena to discuss fencing concerns and how to advance project.

September 1999	Highway 234 Advisory Committee formed by Hill County Commissioners and first Committee meeting held on September 22.
November 10, 1999	Highway 234 Advisory Committee meeting. Working group formed to identify fence options.
December 1999 - January 2000	Highway 234 Advisory Committee fence working group considers and develops several potential fence options.
January 12, 2000	Highway 234 Advisory Committee meets on January 12 to review fencing options.
January 26, 2000	Highway 234 Advisory Committee meeting and provides recommendations for fencing option and other measures to Hill County Commissioners.
February 7, 2000	Highway 234 Advisory Committee work and recommendations presented to Hill County Park Board.
April 2000	MDT meets with Hill County to review fence locations and obtain input for preliminary design plans.
May 24, 2000	Hill County Commissioners hold Open House meeting to present and obtain comments on fencing options.
July 2000	After consideration of public comments from Open House, Hill County Commissioners endorse variable corridor option and announce their intention to seek a lower speed limit in park, increase law enforcement, and develop off road water sources for cattle. The Commissioners also restate their intention to seek a variance from the state law requiring fencing of the road corridor.
January 16, 2001	Senate Bill 259 introduced and read before the Montana Senate.
January 19, 2001	MDT "in-house" meeting to discuss options for proceeding with the reconstruction project and considering funding and environmental issues.
February 7, 2001	Public Hearing on Senate Bill 259 before the Senate Agriculture, Livestock, and Irrigation Committee.
February 16, 2001	Senate Bill 259 unanimously passes third reading in Senate and is sent to House.
March 8, 2001	Public Hearing on Senate Bill 259 before the House Agriculture Committee.
March 21, 2001	House unanimously concurs with third reading of bill.
April 5, 2001	Senate Bill 259 signed by Governor Martz. Effective October 1, 2001.

D. Distribution List for Document

The following agencies, groups, and individuals are being sent a copy of this Environmental Assessment:

FEDERAL AND STATE AGENCIES WITH INTERESTS IN PROJECT

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Montana Division Office
2880 Skyway Drive
Helena, MT 59602

U.S. DEPARTMENT OF THE INTERIOR
National Park Service
Midwest Region
1709 Jackson Street
Omaha, NE 68102-2571
Attn: Robert Anderson, Program Leader - Grants

U.S. DEPARTMENT OF THE INTERIOR
U.S. Fish & Wildlife Service
301 South Park, Box 10023
Helena, MT 59626
Attn: Scott Jackson

U.S. ARMY CORPS OF ENGINEERS (COE)
Federal Building, 301 South Park
Room 283, Drawer 10014
Helena, Montana 59626-0014
Attn: Todd Tillinger

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
Northeastern Land Office
P.O. Box 1021
Lewistown, MT 59457-1021
Attn: Craig Roberts, Area Manager

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
Havre Unit Office
P.O. Box 868
Havre, MT 59501-0868
Attn: Casey Kellogg, Unit Manager

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
P.O. Box 200901
Helena, Montana 59620-0901
Attn: Jeff Ryan

MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701
Attn: Glenn Phillips, Fisheries Division

MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701
Attn: Chas Van Genderen, Parks Division

MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS
Headquarters Region 6
Route 1-4210
Glasgow, MT 59230
Attn: Jim Satterfield, Regional Supervisor

MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS
Havre Area Resource Office
2165 Hwy 2 East
Havre, MT 59501

STATE LIBRARY
Collection Management Librarian
1515 East Sixth Avenue
Helena, MT 59620-1800

ENVIRONMENTAL QUALITY COUNCIL
Office of the Director
Capitol Post Office Box 215
Helena, MT 59620

LOCAL AGENCIES AND INTERESTS

HILL COUNTY COMMISSIONERS
Hill County Courthouse
315 Fourth Street
Havre, MT 59501

Steve Mariani, Chairman
Hill County Park Board
1195 16th St
Havre, MT 59501-5459

Lou Hagener
612 17th Street
Havre, MT 59501

Craig Erickson
Bear Paw Development Corporation
P.O. Box 170
Havre, MT 59501

Ross Gammon
8160 1st West
Havre, MT 59501

Con Nystrom
RR1
Box Elder, MT 59521

Ed Solomon
P.O. Box 2323
Havre, MT 59501

Lon Waid
P.O. Box 372
Havre, MT 59501

Dean Hanson
P.O. Box 106
Gildford, MT 59525

Lin Nelson
HC 30, Box 344
Havre, MT 59501

Wayne Vaught
309 1st Street
Havre, MT 59501

Ray Peck
729 4th Avenue
Havre, MT 59501

Leon LaSalle
RR1 Box 375
Box Elder, MT 59521

Gary Berg
1461 Lincoln Avenue
Havre, MT 59501

Rob Myers
Shambo Route, Box 333
Havre, MT 59501

Mel Gomke
P.O. Box 129
Kremlin, MT 59532

Bernie Golie
HC 30 Shambo Route, Box 368
Havre, MT 59501

Honorable Jonathan Windy Boy, Chairman
Chippewa Cree Business Committee
Rocky Boy Route #544
Box Elder, MT 59521

Honorable Phyllis Leonard
Havre City Council
P.O. Box 231
Havre, MT 59501

Havre-Hill County Library
402 3rd St
Havre, MT 59501

E. List of Agencies With Jurisdiction and/or Permits Required

The following agencies have permit requirements applicable to this proposed action:

Hill County - Floodplain Development Permit for the proposed work in the delineated floodplain of Beaver Creek within the 14.9 km South of Havre South project area.

Department of Natural Resources and Conservation - Development of springs as supplemental water sources for livestock in Beaver Creek County Park would require the completion of *Form 602 R3-00: Notice of Completion of Groundwater Development* and payment of $25.00 filing fee. This form documents groundwater developments with a maximum use of 35 gallons per minute or less not to exceed 10 acre-feet per year.

U.S. Department of the Army, Corps of Engineers (Regulatory Office) - *Section 404* Permit for placing fill material associated with road construction in wetlands or "Waters of the U.S."

Montana Department of Fish, Wildlife & Parks - *124SPA* Permit as required under the *MONTANA STREAM PROTECTION ACT* for bridge replacements and any other stream encroachments.

Montana Department of Environmental Quality, Permitting and Compliance Division - Notice of intent to be covered by General Permit for storm water and pollution prevention plan in accordance with *Section 402*/Montana Pollutant Discharge Elimination System.

F. List of Other Agencies, Persons, or Groups Contacted or Have Contributed Information

The agencies and individuals below were contacted for information useful to the preparation of this Environmental Assessment. Pertinent correspondence from some of these individuals has been included in **APPENDIX B**.

- Paula Gunlikson, Natural Resources and Conservation Service (Havre Field Office)
- Lou Hagener, Concerned Resident and member of Highway 234 Advisory Committee
- Chas Van Genderen, Parks Division, Montana Department of Fish, Wildlife & Parks
- Walt Timmerman, Parks Division, Montana Department of Fish, Wildlife & Parks
- Mary Ellen McDonald, Montana Department of Fish, Wildlife & Parks (retired)
- Robert Anderson, U.S. Department of the Interior, National Park Service, Midwest Region (Omaha, Nebraska)

Appendices

Appendix A: List of Preparers

The following parties are responsible for the preparation and content of this document:

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services
Montana Department of Transportation
P.O. Box 201001
Helena, MT 59620-1001

Janice W. Brown, Division Administrator
Montana Division Office
Federal Highway Administration
2880 Skyway Drive
Helena, MT 59602

The following consultants assisted the Montana Department of Transportation coordinate, develop supporting information, and write this document:

Robert Peccia & Associates, Inc.
Consulting Civil Engineers, Planners and Designers
825 Custer Avenue
P.O. Box 5653
Helena, Montana 59604

Western Ecotech, LLC.
Biological Resources and Wetlands Consultants
1280 Lariat Road
Helena, Montana 59602

Turnstone Biological
Biological Resources and Wetlands Consultant
P.O. Box 316
Conner, MT 59827

Historical Research Associates, Inc.
Cultural Resource Consultants
111 North Higgins, Suite 504
Missoula, MT 59802-4401

Natural Resource Options, Inc.
Range Management Consultant
P.O. Box 1871
Bozeman, MT 59771

Appendix B: Pertinent Correspondence

RECEIVED
JAN 0 8 2002
ENVIRONMENTAL

A CENTURY OF CONSERVATION
1901 2001
Montana Fish, Wildlife & Parks

1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701
January 6, 2002

MASTER FILE COPY

Jean Riley
Montana Department of Transportation
P.O. Box 2001001
Helena, MT 59620-1001

RE: Beaver Creek County Park Project – STPS 234-1(7) 9; CN 2837

Dear Ms. Riley:

Regarding the above-mentioned project, I met with David C. Larson and Dan Norderud on November 26, 2001 to seek resolution to ongoing challenges at Beaver Creek County Park and road improvements your departments seeks to complete. Following that meeting on December 10, 2001 I consulted Robert Anderson of the National Park Service (NPS). As you know, the NPS provides oversight of the Land & Water Conservation Fund Program (LWCF). Based on this conversation, Montana State Parks agrees to the following:

1. Although no dedicated easement exists for Highway 234 in the park, we agree to treat the park's 6(f) boundary as though a 60' right of way easement was in place under the existing road alignment. Therefore, the existing road is not considered encumbered under Section 6 (f)(3) of the LWCF Act.

2. In order to ensure proper management, we concur that DOT should acquire control of the right-of-way, which will allow the Federal Highway Administration to commit funding to the project. This right-of-way will constitute a conversion-in-use under Section 6(f)(3) of the LWCF Act for all lands beyond those referred to in item 1 above.

3. In order to satisfy the provisions of Section 6(f)(3), we will accept, as replacement property, up to 40 (approximately 38+) acres of land from an unidentified "party willing to sell," as described in your November 26, 2001, meeting summary. This replacement property must be adjacent to Beaver Creek County Park, as specified. Please note that land appraisals, following the Uniform Appraisal Standards for Federal Land Acquisitions, are routinely required for a Section 6(f)(3) conversion. However, NPS has granted a waiver in this case.

4. Acceptance of the replacement property is contingent upon it being of equal recreational usefulness as the property being converted.

We have agreed to the stipulations above because we perceive that this is a unique conversion case and we wish to ensure that important road construction is not delayed further. However, please understand that because each Section 6(f)(3) conversion is different, this agreement is not intended in any way to set precedent for future such conversion issues. Please contact me if you have questions or concerns at (406) 444-3756. Thank you.

Sincerely,

Chas Van Genderen,
Alternate State Liaison Officer

c: Walt Timmerman, LWCF Program Coordinator
Dan Norderud, Robert Peccia and Associates
Pat Conway, Hill County Commission
Bob Anderson, National Park Service
Project Files (3)

RECEIVED
JUN 20 2001
ENVIRONMENTAL

MASTER FILE COPY

A CENTURY OF CONSERVATION
1901 2001
Montana Fish, Wildlife & Parks

1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701

June 11, 2001

Post-it® Fax Note 7671

To DAN NORDERUD		Date 8/20/01	# of pages ▶ 2
Co./Dept. PECCIA		From DAVID C. LARSON	
Phone # 447-5000		Co. MDT	
Fax # 447-5036		Phone # 444-7648	
		Fax # 444-7245	

Terry Yarger
Montana Department of Transportation
P.O. Box 2001001
Helena, MT 59620-1001

Dear Mr. Yarger:

This letter is in response to a decision this office was to consider involving the widening of the highway within Beaver Creek County Park and replacement of lands under the Land and Water Conservation Fund Act (LWCF). Specifically, during a meeting with Montana Department of Transportation (MDOT), Federal Highways Administration (FHWY), National Park Service (NPS) and Montana Fish, Wildlife & Parks (FWP) on April 11, 2001 to discuss the conversion of LWCF encumbered lands related to project 9750.006, this office was asked to decide whether the road widening that will take place within the park would convert the entire new easement or just that area that will be paved, approximately 38.03 acres or 1.93 acres, respectively. MDOT's desire was to minimize the amount of property converted and, therefore, the cost of replacement lands as required under the LWCF.

This decision follows FWP securing approval for a reduced LWCF boundary within the park. That reduced boundary now encumbers the southern half of the park. This office initiated the section 6(f) boundary reduction due to the fact that: a) The majority of developed facilities occur in the south half of the park, b) that is where the majority of monies have been spent in association with previous LWCF projects, and c) FWP desires to cooperate on this project while reducing overall projects costs where reasonable. Please refer to earlier correspondence for boundary descriptions.

FWP, as the agency responsible for LWCF administration within the state, evaluated three primary issues in association with this decision as follows:

> Issue 1: People may park along the road following the project, as they currently do, in the affected area, therefore, only the new paved area will be converted.
>
> Response: Parking and recreational access facilities in the encumbered south half of the park largely have developed parking and road spurs. Based on discussions with Hill County

Commissioner Pat Conway and my personal recollection, use of the roadside for parking in this area is limited and should not be encouraged.

Issue 2: How will right-of-way easement purposes and activities affect recreation?

Response: MDOT will have a right of way easement for the roadway. The primary purpose of the easement will be to manage and maintain safe transportation. The LWCF identifies that properties encumbered by lands must have the primary purpose of providing outdoor recreation. While it can be argued that recreation will still occur within the easement, recreation will conflict with the easement purpose (there can only be one primary purpose).

Issue 3: How would control and tenure of the lands within the easement affect recreation purposes?

Response: Control and tenure of the easement would be under the authority of MDOT. The LWCF grants were provided to Hill County as the project sponsor. Therefore, since control of the lands within the right-of-way easement would no longer be controlled by the grantee, this would in essence be a conversion of ownership (control).

Following consideration of these and other issues, this office feels that the full area within the right-of-way easement must be replaced. Estimates provided by Dan Norderud of Robert Peccia and Associates have estimated this area to be approximately 38.03 acres. Please verify the total acreage prior to finalizing the conversions.

FWP, with cooperation and approval from the NPS, will continue to be flexible in completing this conversion of 6(f) encumbered lands as the project moves forward. Please contact me if you would like to discuss this decision further.

Sincerely,

Chas Van Genderen
Operations and Management Bureau Chief
Parks Division

c: Joel Marshik, MDOT
Pat Conway, Hill County Commission
Dale Paulson, Federal Highway Administration
Bob Anderson, National Park Service
Jim Satterfield, Montana Fish, Wildlife & Parks
Project files (3)

March 3, 1849

United States Department of the Interior

NATIONAL PARK SERVICE

MIDWEST REGION
1709 JACKSON STREET
OMAHA, NEBRASKA 68102-2571

IN REPLY REFER TO:
30-00016(MWR-CRSP/G)
30-00238

RECEIVED
APR 17 2001
RECREATION [illegible]

APR 12 2001

Mr. Charles Van Genderen
Assistant State Liaison Officer
Parks Division
1420 East Sixth Avenue
P.O. Box 200701
Helena, Montana 59620-0701

Dear Mr. Van Genderen:

Reference is made to your correspondence dated March 27 regarding Beaver Creek Park in Hill County. We concur with your proposal to reduce the area of parkland encumbered under Section 6(f)(3) of the Land and Water Conservation Fund (L&WCF) Act (Public Law 88-578, as amended). Accordingly, we are approving the revised boundary map submitted with your March 27 correspondence as delineating the official L&WCF project boundary.

Our decision is based upon agreement that the southern half (approximate) of the park is developed, operated, and managed for recreational purposes while the northern portion is relatively undeveloped and managed for multiple uses including open cattle range. L&WCF policy does allow us the discretion to limit the section 6(f)(3) encumbrance when it can be clearly shown that a lesser area is a logical management unit. We believe that is the case within Beaver Creek Park.

Thank you for your coordination on this issue. Any questions you have may be directed to Terree Klanecky at 402-221-3202 or me at 402-221-3358.

Sincerely,

Robert Anderson

Robert Anderson
Program Leader - Grants

RECEIVED
APR 23 2001
ROBERT PECCIA
& ASSOCIATES

1420 East Sixth Avenue
PO Box 200701
Helena, MT 59620-0701
March 8, 2001

Terree Klanecky
National Park Service
1709 Jackson Street
Omaha, NE 68102

DRAFT

Dear Terree:

In follow up to our on going discussion regarding Beaver Creek Park, we are requesting an adjustment to the section (6)(f)(3) boundary. This park received two LWCF projects (30-00016 and 30-00238). Additionally, Montana Fish, Wildlife & Parks acknowledges that it received three grants (30-00027, 30-00442 and 30-00607V) for development of the FAS. Currently, the entire +-10,000 acre park is encumbered under the act, based on comments received from your office of the National Park Service. Our goal is to re-configure the 6(f) project boundary to clarify general confusion over the project boundary.

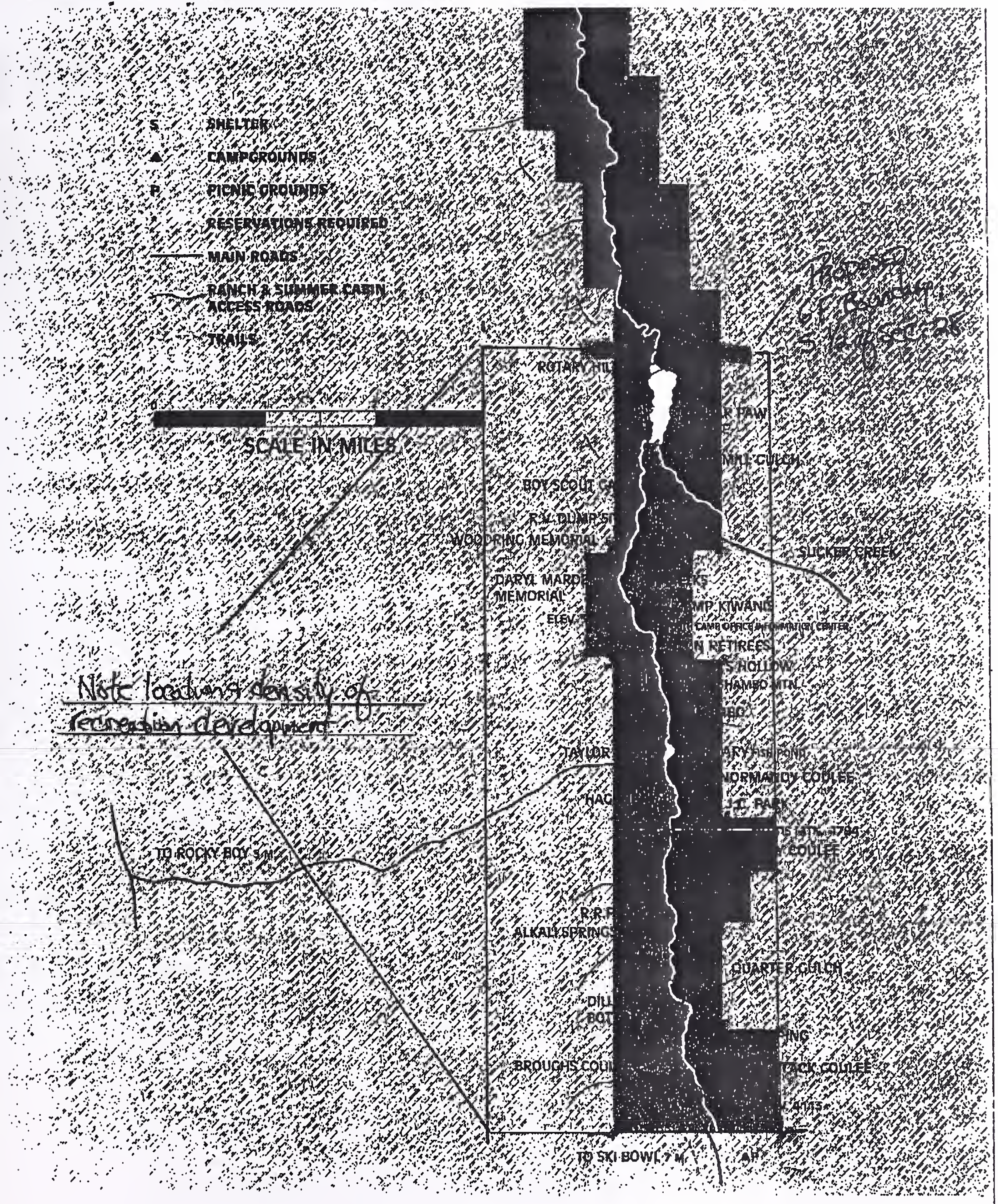
Section 6(f) of the Land and Water Conservation Fund Act conditions that no property acquired or developed with assistance under the Act shall be converted to other than public outdoor recreation uses, without approval of the Secretary. The LWCF grants manual stipulates in chapter 660.2 that if it can be shown that lesser units of a park can be shown to be clearly self-sustaining they can then be encumbered under the 6(f) provision as a logical management unit.

Enclosed are two maps, which illustrate the reduced project boundary. Specifically, we are requesting that the new boundary include all lands in the south ½ of section 28, and all of section 33 in T30N R16E as well as all county park lands in T29N R16E and described as follows: All of section 4 except the E½ of SE ¼, E½ of SE ¼ in section 5, E ½ of NE ¼ Section 8, all of section 9 except the E ½ of NE ¼; Section 16, Section 21, NW ¼ of Section 22, Section 28, Section 33, W ½ of Section 34.

This proposal if approved, would continue to encumber and protect those lands improved with LWCF monies, historically. Additionally the area described represents a self-sustaining outdoor recreation resource as evidenced by the three separate accesses to the park and the inclusion of the vast majority of developed recreation within the park and finally that portion of the park that receives greatest use.

I appreciate your prompt attention to this request and am happy to respond to any questions or concerns you might have.

Sincerely,
Charles Van Genderen
Assistant State Liaison Officer
Enclosure



Proposed Boundary S ½ sec 28

Note locations density of recreation development

MDT

Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

RECEIVED
DEC 05 2000
ENVIRONMENTAL

RECEIVED
NOV 08 2000
BY:

CONCUR
PROJECT WILL HAVE
NO EFFECT ON NRHP QUALITIES
MONTANA SHPO
DATE 6 Dec 2000 SIGNED

November 6, 2000

Mark Baumler
State Historic Preservation Office
Montana Historical Society
1410 East 8th Avenue
P.O. Box 201202
Helena, MT 59620

Subject: **14.9 KM South of Havre South**
STPS 234-1(7)9
Control Number 2837

Dear Mark,

This letter and its attachment constitute Montana Department of Transportation's (MDT) finding of effect for the 14.9 Kilometers South of Havre South project.

The project begins 14.9 kilometers south of the City of Havre. Site 24HL1116, the Manuel Complex, lies considerably north of the project starting point. The eligibility of this property remains unresolved but it falls outside of the area of potential effect (APE) for this project.

There is one site with unresolved eligibility within the APE. It is 24HL1117, the Beaver Creek CCC Camp. The Beaver Creek CCC Camp consists of a stone entrance gate and three concrete foundations. Based on historic photos we know that two of the three foundations supported garages. The gate is the only readily visible feature at the site. SHPO and MDT disagree about the eligibility of this property. SHPO believes it significant and MDT believes it lacks sufficient integrity to convey significance under Criterion A.

The last letter MDT received from SHPO (4/4/00) compared the gate at 24HL1117 to two other sites in Montana. One is 24LA224, the CCC-built stone gate at the Bison Range- a site at which, I might add, there is a complex of buildings constructed by the CCC for the US Biological Survey. The other site mentioned in the letter is 24PW463, Kading Guard Station. Kading is an eligible property constructed by the

CCC. However, it consists of a log cabin with outhouse, tack shed, and corrals, all with good integrity, and lacks a gate of any kind. It is located on US Forest Service (Helena National Forest) property, not ground administered by the Bureau of Reclamation as stated in the letter.

The 14.9 Kilometers South of Havre South project has been designed in such a way that the Beaver Creek CCC camp gate will be left in its original location. The gate will be entirely avoided during construction. Note that the attached plans call out "128+26.9 TO 128+32.3 ROCK WALL RT. DO NOT DISTURB" and "128+54.4 TO 128+59.4 ROCK WALL RT. DO NOT DISTURB." The gate will continue to mark the approach to the Hill County garbage transfer station.

If you have questions about this matter please contact me at 444-0455 or splatt@state.mt.us.

Steve Platt, Archaeologist
Environmental Services

Cc: Gordon Stockstad, Chief, Resources & Permitting

Montana Department of Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, Montana 59620

CE
OV 6 199
ROMENT

MASTER FILE COPY

November 3, 1995

Joel M. Marshik, P. E.
Manager, Environmental Services
Montana Department of Transportation
P. O. Box 201001
Helena, MT 59620-1001

RE: STPS 234-1(4)0
Havre - South
Control #2837

Dear Joel:

We have reviewed your above-mentioned proposed project area and would like to bring to your attention the existence of the Bear Paw Lake FAS and Beaver Creek County Park, in the area of above-proposed project.

Both of these sites were developed with the assistance of federal money through the Land and Water Conservation Fund. If any part of the sites will be affected by your project, we will have to work with the federal government to mitigate any Section 6(f) impacts. Also, you will need to work with our Great Falls Region Office to mitigate any Section 4(f) impacts.

If you feel there may be potential impacts, please contact me and I will provide you with any additional information you may require.

Thank you for the opportunity to comment.

Sincerely,

Maryellen McDonald

MARY ELLEN MC DONALD
Administrative Officer
Recreation & Resources Bureau
Parks Division

cc: Region 4 Supervisor
Nora Nelson
606 - 16th St.
Havre, MT 59501-5301

Appendix C: Open Range Fencing Law and Senate Bill 259

2001 Montana Legislature

About Bill -- Links

SENATE BILL NO. 259

INTRODUCED BY J. TESTER, JERGESON, MCCANN, MUSGROVE, WOLERY

AN ACT ALLOWING A SECONDARY ROAD THAT PASSES THROUGH OPEN RANGE IN A COUNTY PARK TO REMAIN UNFENCED PROVIDED THAT CERTAIN CRITERIA ARE MET TO MITIGATE SAFETY HAZARDS PRESENTED BY LIVESTOCK; AND AMENDING SECTIONS 60-7-102, 60-7-103, AND 60-7-202, MCA.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 60-7-102, MCA, is amended to read:

"60-7-102. Definitions. As used in 60-2-208 and 60-7-101 through 60-7-103, the following definitions apply:

(1) A "high-hazard area" is a segment of the primary or secondary highway system passing through open range where livestock ~~moves~~ move on or across the highway often enough, in enough numbers, and with enough ease of access that ~~such~~ the animals create a significant traffic safety hazard. Evidence bearing on whether animals on the highway pose a significant hazard includes, without limitation, past accident records, the opinions of persons qualified by experience to evaluate the relative safety of road conditions, and the terrain around the road.

(2) "Livestock" means cattle, sheep, swine, horses, mules, and goats.

(3) A "low-hazard area" is a segment of the primary or secondary highway system passing through open range ~~which~~ that is not a high-hazard area.

(4) "Open range" means those areas of the state where livestock ~~is~~ are raised and maintained in sufficient numbers ~~as~~ to constitute a significant part of the local or county economy and where ~~such animals~~ livestock graze and move about generally unrestrained by fences."

Section 2. Section 60-7-103, MCA, is amended to read:

"60-7-103. Department to fence right-of-way through open range -- exception. (1) ~~The~~ Except as provided in subsection (3), the department shall fence the right-of-way of any part of ~~the state highway system~~ a primary or secondary highway or a county road or bridge that is constructed or reconstructed after July 1, 1969, through open range where livestock present a hazard to the safety of the motorist. ~~Where~~ When a fence is constructed, adequate stock gates or stock passes, as necessary, ~~shall~~ must be provided to make land on either side of the highway usable for livestock purposes.

(2) The department shall erect a right-of-way fence in ~~every~~ the high-hazard ~~area~~ areas where fencing is warranted as promptly as possible, and the cost of ~~such~~ the fence construction is an expenditure for the enforcement of federal-aid highway safety programs. ~~Gates~~ Even if a right-of-way fence is determined to be unwarranted pursuant to subsection (3), gates, stock underpasses, water facilities, and cattle guards may be installed where necessary to enhance safety and to make the land on either side of the highway usable for livestock purposes or where a public right-of-way intersects the state highway.

(3) The department is not required to fence the right-of-way of a secondary highway through open range that passes through a county park, provided that:

(a) the department and the board of county commissioners:

(i) agree that the criteria listed in this subsection (3) have been adequately met; and

(ii) cooperate in developing an accident mitigation plan for the portion of the highway that will remain unfenced. The plan may include the speed limit established as provided in 61-8-309 or 61-8-310, how the criteria listed in this subsection (3) have been met, how the plan will be implemented, and any other issues related to minimizing accidents involving livestock and motor vehicles where a fence has not been erected.

(b) livestock grazing does not occur from Memorial Day to Labor Day;

(c) the speed limit established as provided in 61-8-309 or 61-8-310 is clearly posted and enforceable;

(d) warning signs indicating that livestock may be on the road are posted at regular intervals along the road and maintained during the months that livestock grazing occurs;

(e) livestock management practices, such as locating water and administering dietary supplements away from the road and developing grazing and herding plans that minimize the amount of time that livestock are on or near the road, are employed; and

(f) the unfenced portion of the road does not exceed 20 miles in length."

Section 3. Section 60-7-202, MCA, is amended to read:

"**60-7-202. Exclusions.** Section 60-7-201 does not apply to the following:

(1) livestock on state highways under the charge of one or more herders;

(2) the parts of fenced highways adjacent to open range where a highway device has not been installed to exclude range livestock;

(3) the parts of a state highway or a part of the federal-aid primary system ~~which~~ that the department of transportation designates as being impracticable to exclude livestock. These portions of the highway ~~shall~~ must be marked by proper signs in accordance with the department's manual and specifications for a uniform system of traffic-control devices.

(4) the parts of the secondary highway system that pass through county parks and that meet the criteria established in 60-7-103(3)."

- END -

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Detailed Bill Information

2001
Session

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Bill Draft Number: LC0065 Current Bill Text
Bill Type - Number: SB 259
Short Title: Revise highway fencing requirements under certain circumstances
Primary Sponsor: Jon Tester

Bill Actions - **Current Bill Progress:** Became Law

Bill Action Count: 45

Action - Most Recent First	Date	Votes Yes	Votes No	Committee
Chapter Number Assigned	04/05/2001			
(S) Signed by Governor	04/05/2001			
(S) Transmitted to Governor	03/27/2001			
(H) Signed by Speaker	03/26/2001			
(S) Signed by President	03/24/2001			
(S) Returned from Enrolling	03/22/2001			
(C) Sent to Printing	03/22/2001			
(S) Sent to Enrolling	03/22/2001			
(H) Returned to Senate	03/21/2001			
(H) 3rd Reading Concurred	03/21/2001	100	0	
(H) Scheduled for 3rd Reading	03/21/2001			
(H) 2nd Reading Concurred	03/20/2001	100	0	
(H) Scheduled for 2nd Reading	03/20/2001			
(H) Scheduled for 2nd Reading	03/19/2001			
(H) Committee Report--Bill Concurred	03/14/2001			(H) Agriculture
(H) Committee Executive Action--Bill Concurred	03/14/2001	18	0	(H) Agriculture
(H) Hearing	03/08/2001			(H) Agriculture
(H) Hearing Canceled	03/02/2001			(H) Agriculture
(H) Referred to Committee	03/01/2001			(H) Agriculture
(H) First Reading	03/01/2001			
(S) Transmitted to House	02/16/2001			
(S) 3rd Reading Passed	02/16/2001	47	0	
(S) Scheduled for 3rd Reading	02/16/2001			
(S) 2nd Reading Passed on Voice Vote	02/15/2001	49	0	

(S) Scheduled for 2nd Reading	02/14/2001			
(C) Sent to Printing	02/13/2001			
(S) Committee Report--Bill Passed as Amended	02/13/2001			(S) Agriculture, Livestock and Irrigation
(S) Committee Executive Action--Bill Passed as Amended	02/13/2001	11	0	(S) Agriculture, Livestock and Irrigation
(S) Hearing	02/07/2001			(S) Agriculture, Livestock and Irrigation
(C) Introduced Bill Text Available Electronically	01/16/2001			
(S) Referred to Committee	01/16/2001			(S) Agriculture, Livestock and Irrigation
(S) First Reading	01/16/2001			
(S) Introduced	01/16/2001			
(C) Draft Delivered to Requester	01/15/2001			
(C) Draft Ready for Delivery	01/02/2001			
(C) Draft in Assembly/Executive Director Review	12/28/2000			
(C) Draft in Final Drafter Review	12/27/2000			
(C) Bill Draft Text Available Electronically	12/27/2000			
(C) Draft in Input/Proofing	12/27/2000			
(C) Draft to Drafter - Edit Review [SAB]	12/21/2000			
(C) Draft in Edit	12/21/2000			
(C) Draft in Legal Review	12/20/2000			
(C) Draft On Hold	12/04/2000			
(C) Draft to Requester for Review	10/26/2000			
(C) Draft Request Received	06/19/2000			

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Sponsor, etc.

Sponsor, etc.	Last Name/Organization	First Name	Mi
Requester	Tester	Jon	
Drafter	Kurtz	Leanne	
Primary Sponsor	Tester	Jon	

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Subjects

Description	**Revenue/Approp.**	**Vote Majority Req.**	**Subject Code**
Highways and Roads		Simple	HWY
Livestock (see also: Agriculture; Taxation--Agriculture/Livestock)		Simple	LVTK
Traffic Regulations (see also: Motor Vehicles)		Simple	TRAF

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Additional Bill Information

Probable Fiscal Note: No
Preintroduction Required: N
Session Law Ch. Number: 204
DEADLINE
Category: General Bills
Transmittal Date: 02/23/2001
Return (with 2nd house amendments) Date: 03/31/2001

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Section Effective Dates

Section(s)	**Effective Date**	**Date Qualified**
All Sections	10/01/2001	

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Appendix D: Draft Safety Management Plan for Highway 234

DRAFT Safety Mitigation Plan DRAFT
Version November 7, 2001

I. Introduction

Whereas, Hill County and the Montana Department of Transportation (MDT) nominated a project for Beaver Creek Road (Secondary 234) South of Havre Montana and MDT staff had recommended fencing along this secondary route within Beaver Creek Park as a countermeasure to the identified vehicle-domestic animal crash trend. Accident data on highway 234 indicate that auto accidents have been a result of several factors, one of which is livestock. The local community produced a petition with over 1,490 signature opposing the fencing. A committee was formed composed of citizens, ranchers, Park Board members, and MDT representatives with a goal of reaching a compromise solution. A recommendation of the committee was to attempt to exempt the Beaver Creek road from the fencing requirement. Following a lobbying effort of the parties, the 2001 State Legislature passed SB-259, which exempts this road way from the fencing requirement.

Whereas, SB-259 was passed with requirements that a safety plan be developed,

Therefore, in order to improve safety along the route, to reduce risks, and to comply with the intent of SB-259 the following measures are recommended.

II. Road design and features

These are actions that will be built into the road to reduce hazards of design and caution or discourage drivers from driving irresponsibly.

A. Engineering standards require the highway be designed to accommodate safe travel in normal daylight with dry clear surface at 55mph. This action is incorporated in the design.

B. Cattleguards will be installed at the entrance and beginning of the project (T31N R16E Sec 31 SWNW) and at the existing cross fence (T29N R16E Sec 9 SENW) . The existing locations will be installed as part of the original project.

As a part of the road update the following cattleguards will be provided and installed by MDT.

-A new cattleguard location will be installed just south of the High Road junction near the Car wash bridge (between index points 27 and 28, T30N R16E Sec 5 NWNW)

-A second new cattleguard location will be installed between the bridge at Eagle rock and the Rehm junction (between index points 75 and 76, T30N R16E Sec 21 NWNW).

Locations will have 1050 feet of straight and clear visibility on both sides of the cattleguard (no curves or hills to obscure visibility).

-Other subsequent cattleguard locations may be installed in the future as the need arises and is negotiated between MDT and Hill County.

C. MDT will install and maintain delineator reflectors to mark the edge of the highway with the purpose of reducing probability of drive off and single vehicle accidents.

III. Warning and Public Information

A. Wildlife crossing signs will be installed at known high-risk areas for wildlife or at intervals not to exceed every five miles which ever is shorter . These signs will be provided and maintained by the MDT.

B. "Livestock at large" and "Open Range" signs will be installed at each public entrance [(6) (North main entrance, High road entrance, Eagle Rock Estates, Sucker Creek, Taylor Road, South park entrance)] to the park only for those times that livestock will be on the park. MDT will provide all signs. MDT will install and remove signs at the North Park entrance, Taylor road and Sucker Creek. Hill County will install and remove signs at Eagle Rock Estates, High Road and South entrance of the park. These signs may be supplemented with others warning signs as deemed necessary. A flashing warning light may be placed at the north entrance of the park and other locations.

C. Road hazards will be incorporated in informational signs and literature for the park. This could include a park entrance sign. Information signs will be developed and installed by Hill County.

D. The County will issue notice in the local newspaper (not less than 3 x 5 inches) for the week preceding the time cattle will be turned into the park. The County will arrange a Public Service announcement on the local radio station before stock is placed on the park.

IV. Administration and Enforcement

A. Recognizing that "driving under the influence" and reckless driving are known to be a significant issues on highway 234. The County requests that Hill County Sheriff's department and Montana Highway Patrol schedule more frequent enforcement patrols on this road with emphasis on times of anticipated high traffic i.e. weekends, holidays, following sports events, school holidays.

B. The County requests a reduced speed posting around camp Kawanis where pedestrian are likely to be walking and bicycling.

C. The County requests a speed study be conducted in accordance with MCA __________after the project has been completed to evaluate speed limits. The county specifically requests that design of the study consider that a good deal of the traffic in Beaver Creek park is up and back in the same day and is not through traffic

D. Because speed limits in themselves do not control speed, emphasis will be placed on warning drivers of hazards of wildlife, people and livestock on the road. Studies indicate that responsible drivers travel at speeds they believe are safe and prudent in consideration of what they expect to be on the road. (MDT undated referencing: FHWA-RD-97-002, and January 1990, Public Works Magazine, "Traffic Engineering Myths and Realities")

V. Vegetation management

A. Vegetation rehabilitation on the side of the road following construction will be low growing plants to aid driver visibility and less palatable species to discourage grazing on the edge of the highway.

B. Where and when practical, the county will encourage and permit harvesting of hay during the summer along the road to increase visibility for wildlife and motorists. Also vegetation harvested for hay will reduce the forage used by grazing livestock. MDT reserves the option to mow roadside vegetation as deemed necessary to meet safety needs and will not be assessed for loss of hay or forage by the County or users of the park.

C. Livestock Management practices

1. Facilities

Where opportunities are available, springs will be developed in strategic locations to reduce the need for livestock to cross the road to water. Livestock prefer drinking from developed springs and stock tanks to wading in streams or reservoirs. (Veira etal 2001) (Virginia Tech 2000) Accessory water developments away from the stream and riparian communities will have the added benefit of improved water quality, reduced impact on riparian vegetation and better livestock distribution. Twelve spring locations were recommended for development in the Advisory Committee recommendations (January 2000)

First priority will be locations where there is forage available, but livestock would be obligated to cross the road to drink if the spring was not developed.

a Cable Gate T30N R16E Section 8 SENW

b Duke Road South T30N R16E Section 21 SWNE

c Kinsella 1 T30N R16E Section 17 SENW

The following springs will reduce livestock needs to cross or be near the road and will make the road safer for motorists. (not necessarily in priority order)

Kinsella 2 T30N R16E Section 17 SWNE

Keiffer Coulee T30N R16E Section 20 NESE

Duke Road North T30N R16E Section 16 SESW

Rotary Hill North T30N R16E Section 21 SWSE

Taylor Road North T29N R16E Section 16 NWNW

Rotary Falls East T30N R16E Section 28 NENE

Anderson Place T30N R16E Section 33 NWNW

Scout T30N R16E Section 33 SWSW

Taylor Road South Section 16 SENW

MDT will arrange for engineering and cost estimations on the above springs and will provide these funds to Hill County to install the springs. Hill County will arrange to have all spring developments functional by the start of the 2002 grazing season and will continue to carry out all future maintenance.

Hill County developed a well at Camp Kawanis and installed a short pipeline to water livestock east of the camp and away from the road (T29N R16E Sec 9 nenw). MDT will furnish the County the price of one standard stock tank (not to exceed 1000 gal) for use on this watering system.

The environmental assessment for the road project has included these spring developments and no further environmental documentation is necessary.

Hill County has arranged for cultural clearance before construction and will not jeopardize any sites known or found.

Hill County will file for appropriate water rights in the name of Hill County.

2. Livestock management practices

a. All trailing of livestock on or through the park will have warning vehicles or riders ahead and behind the herd as per Montana law (MCA 60-7-204). All trailing will occur during full daylight.

b. The normal grazing season will be Tuesday following Labor Day to News Year Day. No stock will be turned on the park for the grazing season prior to daylight on the Tuesday following Labor Day.

c. No livestock will be unloaded/loaded or held on the road for any purpose. All gathering, sorting, "mothering up", rests and similar activities will not be permitted on the road. No livestock will be put on the park without having adequate time to "settle" before dark.

d. When cattle are found concentrating in particular areas where they are creating higher risk of collisions on the road, the county will instruct the stockmen to provide riders and relocate the cattle to other areas where risk of collisions will be reduced.

e. Special grazing treatments maybe infrequently used in the January to May 1 time period to remove fire hazards or manipulate vegetation. All livestock handling measures will apply during this period as during the normal grazing season.

3. Attractants

a. Salt supplements will be provided by the park and be placed by park staff to encourage livestock to use forage and water away from the road and stream. Other than for specific need to create animal impact, no attractants will be placed between the road and stream. Stockmen will not place salt other than at the specific direction of the park management.

b. Energy/protein/mineral supplements may be used to encourage livestock use areas away from the road and stream. Placement will be according to the direction of the park staff in the same manner as salt.

VI. Annual Monitoring and Evaluation

MDT and Hill County will meet each year before April 1 for the purpose of reviewing the effectiveness of the safety measures and accidents that have occurred on the road over the past year. By action from this meeting, other measures may be taken to improve safety on highway 234.

Hill County Commission Date

Montana Department of Transportation - legal review Date

Montana Department of Transportation Date

References cited:

Highway 234 Advisory Committee, (Draft January 26, 2000 as revised on request of Hill County Park Board 2/1/2000), The Citizens Highway 234 Advisory Committee Recommendations

Montana Department of Transportation (undated) Montana Speed Zones, Procedures for Revising Speed Zones On MDT Highways, one page green information paper.

Veira, Douglas M. , L. Liggins, L. Brown and B. John January 2001, Drinking behaviour of cattle with access to natural and developed water supplies., Agriculture and Agri-food Canada – Kamloops B.C.

Virginia Tech (circa 2000), (as reference May 2000, Stockman Grass Farmer), Cattle Prefer Piped Water to Stream Water in Virginia Study

Adopted by Hill Co Park Board Sept 7th 1999

GRAZING POLICIES AND PROCEDURES

A grazing committee composed of two (2) Park Board members, one of which is a Commissioner, Park Superintendent and two (2) ranchers, one appointed by the Park Board and one appointed by the ranching community for a term of two years, (each person may be reelected) will be a standing committee charged with the duty to inspect grazing conditions in the Park annually in July and make recommendations to the Park Board regarding the number of cattle (quota) to be allowed, removal dates for the entire Park or for specific areas, and to make recommendations to the Park Board on any emergency conditions relating to grazing that may arise.

If grazing conditions require extensive or major changes, grazing users should be notified as early as possible so they can plan accordingly.

ELIGIBLE CATTLE

Ranchers eligible to graze cattle in Beaver Creek Park are those whose cattle are assessed in Hill County and who comply will all rules and regulations. If cattle are assessed for six (6) months, they are allowed two (2) months grazing, if assessed for three (3) months, allowed one (1) month of grazing.

No bulls are permitted and no unattended horses are permitted in the Park.

GRAZING SEASON

The grazing season begins in September on the first Tuesday immediately following Labor Day and may extend through December 30th. Removal date may be earlier if so ordered by the Park Board.

PROCEDURE

No cattle may be placed on the Park or removed from it without prior notification of the Park Superintendent. Cattle are subject to count by the Park Superintendent at any time.

Each rancher placing cattle on the Park shall sign a duplicate receipt at the time of counting and placing on the Park certifying the number of cattle put on the Park and indicating his/her knowledge and agreement to all Park Regulations stated therein. Cattle on the Park not covered by a receipt are classed as unauthorized cattle and subject to penalties as described below.

All cattle are to be loaded at the nearest boundary fence to the area where the cattle are to be brought in.

There will be absolutely no moving or herding of cattle without permission of the Park Superintendent.

A rancher will be responsible for moving his/her own cattle when properly notified that grass in his/her area is depleted.

No dogs are allowed to be used in the moving of cattle within the Park boundaries.

Ranchers are responsible for the cost of removal of a dead animal.

Injured cattle should be reported to the Park Superintendent.

There will be no weaning of calves on the Park.

FEES

Fees are based on the animal unit (cow and calf) per month. Fees will be reviewed and adjusted annually determined by resolution adopted by the Park Board. Long yearlings will be subject to the same fees as animal units.

A full months fee will be charged if the cattle are brought on before the 15th of September and prorated if the cattle are brought on after the 15th of September, the first month only.

Any new cattle placed on the Park after September must pay the full month's fees.

PENALTIES

A one and half percent (1 1/2%) penalty per month will be imposed on any fees not paid within 30 days from the final billing date.

No cattle will be accepted for grazing if the bill for the pervious year has not been paid.

Any rancher found to have more than the signed and certified number of cattle on the Park will be charged double the rate for all of his/her cattle on the Park and may be suspended from grazing privileges in the Park for the following year.

UNAUTHORIZED CATTLE

Trespassing stock maybe retained for damages and reasonable charges imposed for keeping. Section 81-4-217, MCA.

SALT

Salt will be furnished by the Park on an as needed basis beginning with the first month (September) until the fourth month (December), at the discretion of the Park Superintendent. Arrangement and distribution will be up to the ranchers and Park Superintendent.

FEEDING OF HAY

Feeding of hay on the Park will not be permitted unless an extreme emergency occurs. This includes hay cut on the park. The feeding of hay will be left to the discretion of the Park Superintendent. If feeding hay is authorized, the hay must be weed free or hay that has been cut off the Park. If feeding hay is authorized, the hay must be weed free.

Adopted by the Hill County Park Board on the 7th day of September, 1999, at Havre, Montana.

Dean A Hanson V. Ch

Hill County Park Board Chairman

Appendix E: "Nationwide" Section 4(f) Evaluation and Related Materials

MONTANA DIVISION

"NATIONWIDE" *SECTION 4(f)* EVALUATION
FOR MINOR USAGE OF
PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND WATERFOWL REFUGES

Project # STPS 234-1(7) 9, (P.M.S. C# 2837)
Project Name: 14.9 km South of Havre South

Date: January 9, 2002
Location: Beaver Creek County Park
Hill County, Montana

This proposed project would reconstruct 16.9± km (10.6± miles) of Montana Secondary Highway 234 within Beaver Creek County Park south of Havre. Beaver Creek County Park, a 4,117-hectare (10,173± acre) park, is owned and administered by Hill County. The proposed project would reconstruct the existing 7.2 m (23.6± feet) wide paved roadway to provide an 8.4 m (27.6± feet) wide finished surface. Three bridges over Beaver Creek would be replaced for greater safety and adherence to current design standards. The project would provide a consistent horizontal and vertical alignment to blend with the topography, enhance safety, and provide more uniform driving conditions and safe travel speeds for motorists. Although a sizable easement across park land would be dedicated for Highway 234 by Hill County, MDT and FHWA concluded only the minor increase in the road's paved surface area would constitute a *Section 4(f)* use. Therefore, the only *Section 4(f)* land used by the proposed transportation project would be the 1.2 m (3.9± feet) of additional paved road surface width MDT intends to build through the park. Maps showing the location of this project are in Part I of the EA.

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

		YES	NO
1.	Is the *4(f)* site adjacent to the existing highway?	X	☐
2.	Does the amount and location of the proposed impact area impair the use of the remaining *Section 4(f)* land for its intended purpose?	☐	X
3.	Does the proposed project require more than a minor amount* of the *Section 4(f)* site for Right-of-Way? **The total area of *Section 4(f)* use was calculated to be 1.88 ha (4.63 acres), or 0.046% of the total park area.**	☐	X
4.	Are there any proximity impacts which would impair the use of the *4(f)* lands for their intended purpose (defined as "constructive use")?	☐	X
5.	Have the officials with jurisdiction over the property agreed in writing with the assessment of impacts and the proposed mitigation?	X	☐
6.	Have Federal funds — such as the *National Land & Water Conservation Fund - Section 6(f)* — been used for the acquisition of, or improvements to the *4(f)* site? **Hill County has received two LWCF grants to improve the county park. The Montana Department of Fish, Wildlife, & Parks (MDFWP) received LWCF assistance in three grants to help develop the Bear Paw Lake Fishing Access Site (FAS) on land within the park leased from Hill County.**	☒	
	If yes — has the land conversion/transfer been coordinated with the appropriate Federal agency,	X	☐
	and are they in agreement? **(1-6-02 Response from MDFWP in Appendix B)**	X	☐
7.	Is the proposed action under an Environmental Impact Statement (E.I.S.)?	☐	X
8.	Is the proposed project on a new location? **The centerline for the new road would be in virtually the same location as that of the existing facility.**	☐	X
9.	The Scope-of-Work for the proposed project is one of the following: a) Improved traffic operation; b) **Safety improvements**; c) 3R; d) **Bridge replacement on essentially the same alignment**; or e) Addition of lanes.	X	☐

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*NOTE: MDT's guidelines for "minor amounts" of Right-of-Way (including Construction Permits) are limited to either 10% of a parcel under 10 hectares (25 acres), or 1% of a parcel equal to or greater than 10 hectares (25 acres) in size.

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

ALTERNATIVES CONSIDERED

	YES	NO
1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent.	X	☐
2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent.	X	☐

The existing roadway could be overlaid without changing the existing surface width or improving the road's alignment, or replacing the bridges on the route. This alternative would not provide desirable stopping sight distance at substandard vertical curves and would not include measures to address other geometric conditions that have contributed to motor vehicle accidents on the route. This alternative would not meet the need to improve the condition and load bearing capabilities of the bridges on Highway 234.

MDT also evaluated the alternative of pulverizing, milling and filling, or overlaying the existing road to improve Highway 234's riding surface. The existing width of the road would be maintained, substandard horizontal or vertical curves would be reconstructed, and roadside slopes would be flattened. A comparison of the costs and benefits showed the difference in cost of such work and totally reconstructing the route was negligible. Greater operational and safety benefits could be achieved by fully reconstructing the route.

	YES	NO
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent.	X	☐

The existing transportation corridor established the location of this project.

	YES	NO
Descriptions of **ALTERNATIVES 2.** and **3.** are attached.	X	☐

Descriptions of these alternatives can be found in Part III of the attached EA.

MINIMIZATION OF HARM

	YES	NO
1. The proposed project includes all possible planning to minimize harm.	X	☐

2. Measures to minimize harm include the following:

	YES	NO
a) Replacement of the lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.	X	___

MDT must provide 15.50 ha (38.29 acres) of replacement park land to Hill County to mitigate for the conversion of *Section 6(f)* land in Beaver Creek County Park. MDT has worked with Hill County to identify potential parcels adjacent to Beaver Creek County Park that could serve as replacement park land. Hill County has identified a 16.19 ha (40-acre) parcel adjoining the park that may be suitable as replacement park land. MDT and Hill County are just beginning the work needed to determine the value of the property and secure an agreement to purchase the replacement park land. MDT will provide MDFWP with an opportunity to review and comment on the replacement land proposal.

	YES	NO
b) Replacement of facilities impacted including sidewalks, paths, benches, lighting, trees and other facilities.	X	___

MDT will reconstruct the highway approaches to developed recreation sites in the park and replace existing fencing, signing, and cattle guards, and other facilities impacted by the proposed project.

	YES	NO
c) Restoration/landscaping of disturbed areas.	X	___

Lands disturbed by construction will be revegetated with desirable plant species.

MINIMIZATION OF HARM (continued)

	YES	NO
d) Special design features.	X	

Several design exceptions are planned to avoid or minimize environmental impacts to Beaver Creek and adjacent park land. MDT would design and construct surfacing inslopes throughout the project at 5:1 for the first 2.7 m (8.8± feet) away from the road's edge instead of at 6:1. MDT would also adjust fill slopes from 4:1 to 2:1 at the bridge ends and one other location within the project area to minimize effects to Beaver Creek and adjacent wetlands.

e) Payment of, or improvements to the remaining *4(f)* lands equal in cost to fair market value.		X
f) Other mitigating measures.	X	

MDT and Hill County will implement a Safety Mitigation Plan for Highway 234 in Beaver Creek County Park in lieu of fencing the roadway corridor. The Safety Mitigation Plan will include a variety of measures to improve the overall safety of highway users (including park visitors), particularly during periods when livestock may be present. A key element of the Plan will be the development of springs at strategic locations in upland areas away from the highway. The springs will provide alternate watering locations and reduce the need for cattle to cross the road to water in the stream. The development of springs will provide other indirect benefits like improving water quality in Beaver Creek, reducing impacts to riparian vegetation caused by livestock, and more efficiently distributing livestock within the park. MDT will fund the costs of installing the new springs but Hill County will plan and oversee the construction of the water developments.

MDT will improve fish habitat in Beaver Creek near the existing highway crossing at Project Station 72+86 by developing deep-water habitat downstream from the new bridge.

MDT will coordinate with Hill County to determine the need for installing temporary signs or other means of advance notice of ongoing construction work for those planning to recreate in the park.

MDT will consult with Hill County to determine if the hours of construction activity on Highway 234 should be restricted due to the presence of recreation sites near the work zone.

COORDINATION

1. The proposed project has been coordinated with the Federal, state, and/or local officials having jurisdiction over the *4(f)* lands.	X	☐

This project has been planned and coordinated with Hill County, the owners and administrators of the *Section 4(f)* property since 1997.

Montana Department of Fish, Wildlife & Parks
Correspondence - November 3, 1995
Correspondence - June 2, 1999
Telephone Conference - April 11, 2001
Correspondence - June 11, 2001
Correspondence - January 6, 2002

U.S. Department of the Interior, National Park Service - Midwest Region
Telephone Conference - April 11, 2001
Correspondence - April 12, 2001

Correspondence pertinent to *Section 4(f)* and LWCF *Section 6(f)* can be found in APPENDIX B of the attached EA.

COORDINATION (continued)

	YES	NO
2) In the case of non-federal *4(f)* lands, the official with jurisdiction has been asked to identify any Federal encumbrances — and none exist.	___	☒

Land and Water Conservation Fund (LWCF) projects have been undertaken by Hill County and the MDFWP at various locations in the park. Only those lands within Beaver Creek County Park south of the mid-section line of Section 28, Township-30-North, Range-16-West are encumbered by the LWCF.

	YES	NO
3) Coordination with the U.S. ARMY - Corps of Engineers has been completed, or a *Section 404* Permit (if applicable) is pending.	X	☐

MDT will apply for a Section 404 Permit from the Corps when design plans for the project are sufficiently completed.

SUMMARY

The "Do Nothing" alternative ignores the basic transportation needs to correct deficiencies related to the geometry of the existing highway and to improve the condition of the existing roadway and its bridges. Nearly 85 percent of all horizontal curves and 33 percent of all vertical curves associated with the existing alignment are deficient. The existing pavement of Highway 234 within the project corridor has a poor driving surface due to excessive cracking and needs overlaying or reconstruction. The three existing bridges must be replaced due to their deteriorated physical conditions, their lack of adequate width, and their inadequate hydraulic capacities. Totally reconstructing Highway 234 on virtually the same alignment as the present roadway was identified as the only viable alternative for this project due to limitations caused by the existing road's location within the county park and the extensive riparian areas and wetlands adjacent to the existing highway. Constructing a road on a new location would cause extraordinary environmental impacts to other park lands or cause notable effects to private lands outside the park. Building on a new location would substantially increase engineering and construction costs since a new road would have to traverse steep and highly variable terrain in the uplands of the park or a new right-of-way corridor across private lands outside the park would have to be purchased. Therefore, no feasible and prudent alternatives exist to avoid the "use" of land from Beaver Creek County Park. Since the road already exists within the park, any additional impacts caused by the project are minimal.

The proposed action meets all criteria regarding the required **Alternatives**, **Coordination**, and **Measures to Minimize Harm**. All possible planning to minimize harm to Beaver Creek County Park has been undertaken and will be incorporated in this proposed project. This proposed project therefore complies with the December 23, 1986 Final Nationwide *Section 4(f)* Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

Jean A. Riley
Jean Riley, P.E.
Engineering Bureau Chief
MDT Environmental Services

Date: 1/17/02

Approved: Darrin Grenfell
Federal Highway Administration

Date: 2/7/02

U.S. Department of Transportation
Federal Highway Administration

FINAL NATIONWIDE SECTION 4(F) EVALUATION AND APPROVAL FOR FEDERALLY-AIDED HIGHWAY PROJECTS WITH MINOR INVOLVEMENTS WITH PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND WATERFOWL REFUGES

This programmatic Section 4(f) evaluation has been prepared for projects which improve existing highways and use minor amounts of publicly owned public parks, recreation lands, or wildlife and waterfowl refuges that are adjacent to existing highways. This programmatic Section 4 (f) evaluation satisfies the requirements of Section 4(f) for all projects that meet the applicability criteria listed below. No individual Section 4(f) evaluations need be prepared for such projects. (Note: a similar programmatic Section 4(f) evaluation has been prepared for projects which use minor amounts of land from historic sites).

The FHWA Division Administrator is responsible for reviewing each individual project to determine that it meets the criteria and procedures of this programmatic Section 4(f) evaluation. The Division Administrator's determinations will be thorough and will clearly document the items that have been reviewed. The written analysis and determinations will be combined in a single document and placed in the project record and will be made available to the public upon request. This programmatic evaluation will not change the existing procedures for project compliance with the National Environmental Policy Act (NEPA) or with public involvement requirements.

Applicability

This programmatic Section 4(f) evaluation may be applied by FHWA only to projects meeting the following criteria:

1. The proposed project is designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same alignment. This includes "4R" work (resurfacing, restoration, rehabilitation, and reconstruction), safety improvements, such as shoulder widening and the correction of substandard curves and intersections; traffic operation improvements, such as signalization, channelization, and turning or climbing lanes; bicycle and pedestrian facilities; bridge replacements on essentially the same alignment; and the construction of additional lanes. This programmatic Section 4(f) evaluation does not apply to the construction of a highway on a new location.

2. The Section 4(f) lands are publicly owned public parks, recreation lands, or wildlife and waterfowl refuges located adjacent to the existing highway.

3. The amount and location of the land to be used shall not impair the use of the remaining Section 4(f) land, in whole or in part, for its intended purpose. This determination is to be made by the FHWA in concurrence with the officials having jurisdiction over the Section 4(f) lands, and will be documented in relation to the size, use, and/or other characteristics deemed relevant.

The total amount of land to be acquired from any Section 4(f) site shall not exceed the values in the following Table:

Total Size of Section 4(f) Site	Maximum to be Acquired
< 10 acres	10 percent of site
10 acres - 100 acres	1 acre
> 100 acres	1 percent of site

4. The proximity impacts of the project on the remaining Section 4(f) land shall not impair the use of such land for its intended purpose. This determination is to be made by the FHWA in concurrence with the officials having jurisdiction over the Section 4(f) lands, and will be documented with regard to noise, air and water pollution, wildlife and habitat effects, aesthetic values, and/or other impacts deemed relevant.

5. The officials having jurisdiction over the Section 4(f) lands must agree, in writing, with the assessment of the impacts of the proposed project on, and the proposed mitigation for, the Section 4(f) lands.

6. For projects using land from a site purchased or improved with funds under the Land and Water Conservation Fund Act, the Federal Aid in Fish Restoration Act (Dingell-Johnson Act), the Federal Aid in Wildlife Act (Pittman-Robertson Act), or similar laws, or the lands are otherwise encumbered with a Federal interest (e.g., former Federal surplus property), coordination with the appropriate Federal agency is required to ascertain the agency's position on the land conversion or transfer. The programmatic Section 4(f) evaluation does not apply if the agency objects to the land conversion or transfer.

7. This programmatic evaluation does not apply to projects for which an environmental impact statement (EIS) is prepared, unless the use of Section 4(f) lands is discovered after the approval of the final EIS. Should any of the above criteria not be met, this programmatic Section 4(f) evaluation cannot be used, and an individual Section 4(f) evaluation rust be prepared.

Alternatives

The following alternatives avoid any use of the public park land, recreational area, or wildlife and waterfowl refuge:

1. Do nothing.
2. Improve the highway without using the adjacent public park, recreational land, or wildlife and waterfowl refuge.
3. Build an improved facility on new location without using the public park, recreation land, or wildlife or waterfowl refuge.

This list is intended to be all-inclusive. The programmatic Section 4(f) evaluation does not apply if a feasible and prudent alternative is identified that is not discussed in this document. The project record must clearly demonstrate that each of the above alternatives was fully evaluated before the FHWA Division Administrator concluded that the programmatic Section 4(f) evaluation applied to the project.

Findings

In order for this programmatic Section 4(f) evaluation to be applied to a project, each of the following findings must be supported by the circumstances, studies, and consultations on the project:

1. Do Nothing Alternative. The Do Nothing Alternative is not feasible and prudent because: (a) it would not correct existing or projected capacity deficiencies; or (b) it would not correct existing safety hazards; or (c) it would not correct existing deteriorated conditions and maintenance problems; and (d) not providing such correction would constitute a cost or community impact of extraordinary magnitude, or would result in truly unusual or unique problems, when compared with the proposed use of the Section 4(f) lands.

2. Improvement without Using the Adjacent Section 4(f) Lands. It is not feasible and prudent to avoid Section 4(f) lands by roadway design or transportation system management techniques (including, but not limited to, minor alignment shifts, changes in geometric design standards, use of retaining walls and/or other structures, and traffic diversions or other traffic management measures) because implementing such measures would result in: (a) substantial adverse community impacts to adjacent homes, businesses or other improved properties; or (b) substantially increased roadway or structure cost; or (c) unique engineering, traffic, maintenance, or safety problems; or (d) substantial adverse social, economic, or environmental impacts; or (e) the project not meeting identified transportation needs; and (f) the impacts, costs, or problems would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of American Association of State Highway and Transportation Officials (AASHTO) geometric standards should be exercised, as permitted in 23 CFR 625, during the analysis of this alternative.

3. Alternatives on New Location. It is not feasible and prudent to avoid Section 4(f) lands by constructing on new alignment because (a) the new location would not solve existing transportation, safety, or maintenance problems; or (b) the new location would result in substantial adverse social, economic, or environmental impacts (including such impacts as extensive severing of productive farmlands, displacement of a substantial number of families or businesses, serious disruption of established patterns, substantial damage to wetlands or other sensitive natural areas, or greater impacts to other Section 4(f) lands or (c) the new location would substantially increase costs or engineering difficulties (such as an inability to achieve minimum design standards, or to meet the requirements of various permitting agencies such as those involved with navigation, pollution, and the environment); and (d) such problems, impacts, costs, or difficulties would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of AASHTO geometric standards should be exercised, as permitted in 23 CFR 625, during the analysis of this alternative.

Measures to Minimize Harm

This programmatic Section 4(f) evaluation and approval may be used only for projects where the FHWA Division Administrator, in accordance with this evaluation, ensures that the proposed action includes all possible planning to minimize harm. This has occurred when the officials having jurisdiction over the Section 4(f) property have agreed, in writing, with the assessment of impacts resulting from the use of the Section 4(f) property and with the mitigation measures to be provided. Mitigation measures shall include one or more of the following:

1. Replacement of lands used with lands of reasonably equivalent usefulness and location and of at least comparable value.
2. Replacement of facilities impacted by the project including sidewalks, paths, benches, lights, trees, and other facilities.
3. Restoration and landscaping of disturbed areas.
4. Incorporation of design features (e.g., reduction in right-of-way width, modifications to the roadway section, retaining walls, curb and gutter sections, and minor alignment shifts); and habitat features (e.g., construction of new, or enhancement of existing, wetlands or other special habitat types); where necessary to reduce or minimize impacts to the Section 4(f) property. Such features should be designed in a manner that will not adversely affect the safety of the highway facility. Flexibility in the application of AASHTO geometric standards should be exercised, as permitted in 23 CFR 625, during such design.

5. Payment of the fair market value of the land and improvements taken or improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.

6. Such additional or alternative mitigation measures as may be determined necessary based on consultation with, the officials having jurisdiction over the parkland, recreation area, or wildlife or waterfowl refuge.

If the project uses Section 4(f) lands that are encumbered with a Federal interest (see **Applicability**) coordination is required with the appropriate agency to ascertain what special measures to minimize harm, or other requirements, may be necessary under that agency's regulations. To the extent possible, commitments to accomplish such special measures and/or requirements shall be included in the project record.

Coordination

Each project will require coordination in the early stages of project development with the Federal, State and/or local agency officials having jurisdiction over the Section 4(f) lands. In the case of non-Federal Section 4(f) lands, the official with jurisdiction will be asked to identify any Federal encumbrances. Where such encumbrances exist coordination will be required with the Federal agency responsible for the encumbrance.

For the interests of the Department of Interior, Federal agency coordination will be initiated with the Regional Directors of the U.S. Fish and Wildlife Service, the National Park Service, and the Bureau of Reclamation; the State Directors of the Bureau of Land Management, and the Area Directors of the Bureau of Indian Affairs. In the case of Indian lands, there will also be coordination with appropriate Indian Tribal officials.

Before applying this programmatic evaluation to projects requiring an individual bridge permit the Division Administrator shall coordinate with the U.S. Coast Guard District Commander.

Copies of the final written analysis and determinations required under this programmatic Section 4(f) evaluation shall be provided to the officials having jurisdiction over the involved Section 4(f) area and to other parties upon request.

Approval Procedure

This programmatic Section 4(f) approval applies only after the FHWA Division Administrator has:

1. Determined that the project meets the applicability criteria set forth above;

2. Determined that all of the alternatives set forth in the Findings section have been fully evaluated;

3. Determined that the findings in this document (which conclude that there are no feasible and prudent alternatives to the use of the publicly owned public park, recreation area, or wildlife or waterfowl refuge) are clearly applicable to the project;

4. Determined that the project complies with the Measures to Minimize Harm section of this document;

5. Determined that the coordination called for in this programmatic evaluation has been successfully completed;

6. Assured that the measures to minimize harm will be incorporated in the project; and

7. Documented the project file clearly identifying the basis for the above determinations and assurances.

Issued on: 12/23/86

Approved: /Original Signed By/
Ali F. Sevin
Office of Environmental Policy
Federal Highway Administration